

Original citation:

Toye, Fran, Seers, Kate and Barker, Karen (2018) A meta-ethnography of health-care professionals' experience of treating adults with chronic non-malignant pain to improve the experience and quality of health care. National Institute for Health Research. (Health Services and Delivery Research).

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A meta-ethnography of health-care professionals' experience of treating adults with chronic non-malignant pain to improve the experience and quality of health care

Fran Toye, Kate Seers and Karen Barker



***National Institute for
Health Research***

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Declared competing interests of authors: Fran Toye, Kate Seers and Karen Barker authored two studies that are included in this qualitative evidence synthesis. Kate Seers is a Health Services and Delivery Research board member and a Health Services Research Commissioning board member.

Published April 2018

DOI: 10.3310/hsdr06170

This report should be referenced as follows:

Toye F, Seers K, Barker K. A meta-ethnography of health-care professionals' experience of treating adults with chronic non-malignant pain to improve the experience and quality of health care. *Health Serv Deliv Res* 2018;**6**(17).

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nihr.ac.uk

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The research reported in this issue of the journal was funded by the HS&DR programme or one of its preceding programmes as project number 14/198/07. The contractual start date was in July 2015. The final report began editorial review in May 2017 and was accepted for publication in August 2017. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

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Abstract

A meta-ethnography of health-care professionals' experience of treating adults with chronic non-malignant pain to improve the experience and quality of health care

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Background: People with chronic pain do not always feel that they are being listened to or valued by health-care professionals (HCPs). We aimed to understand and improve this experience by finding out what HCPs feel about providing health care to people with chronic non-malignant pain. We did this by bringing together the published qualitative research.

Objectives: (1) To undertake a qualitative evidence synthesis (QES) to increase our understanding of what it is like for HCPs to provide health care to people with chronic non-malignant pain; (2) to make our findings easily available and accessible through a short film; and (3) to contribute to the development of methods for QESs.

Design: We used the methods of meta-ethnography, which involve identifying concepts and progressively abstracting these concepts into a line of argument.

Data sources: We searched five electronic bibliographic databases (MEDLINE, EMBASE, Cumulative Index to Nursing and Allied Health Literature, PsycINFO and Allied and Complementary Medicine Database) from inception to November 2016. We included studies that explored HCPs' experiences of providing health care to people with chronic non-malignant pain. We utilised the Grading of Recommendations Assessment, Development and Evaluation Confidence in the Evidence from Reviews of Qualitative research (GRADE-CERQual) framework to rate our confidence in the findings.

Results: We screened 954 abstracts and 184 full texts and included 77 studies reporting the experiences of > 1551 HCPs. We identified six themes: (1) a sceptical cultural lens and the siren song of diagnosis; (2) navigating juxtaposed models of medicine; (3) navigating the patient-clinician borderland; (4) the challenge of dual advocacy; (5) personal costs; and (6) the craft of pain management. We produced a short film, 'Struggling to support people to live a valued life with chronic pain', which presents these themes (see *Report Supplementary Material 1*; URL: www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419807/#/documentation; accessed 24 July 2017). We rated our confidence in the review findings using the GRADE-CERQual domains. We developed a conceptual model to explain the complexity of providing health care to people with chronic non-malignant pain. The innovation of this model is to propose a series of tensions that are integral to the experience: a dualistic biomedical model compared with an embodied psychosocial model; professional distance compared with proximity; professional expertise compared with patient empowerment; the need to make concessions to maintain therapeutic relationships compared with the need for evidence-based utility; and patient advocacy compared with health-care system advocacy.

Limitations: There are no agreed methods for determining confidence in QESs.

Conclusions: We highlight areas that help us to understand why the experience of health care can be difficult for patients and HCPs. Importantly, HCPs can find it challenging if they are unable to find a diagnosis and at times this can make them feel sceptical. The findings suggest that HCPs find it difficult to balance their dual role of maintaining a good relationship with the patient and representing the health-care system. The ability to support patients to live a valued life with pain is described as a craft learnt through experience. Finally, like their patients, HCPs can experience a sense of loss because they cannot solve the problem of pain.

Future work: Future work to explore the usefulness of the conceptual model and film in clinical education would add value to this study. There is limited primary research that explores HCPs' experiences with chronic non-malignant pain in diverse ethnic groups, in gender-specific contexts and in older people living in the community.

Funding: The National Institute for Health Research Health Services and Delivery Research programme.

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List of supplementary material

Report Supplementary Material 1 Video entitled 'Struggling to support people to live a valued life with chronic pain'

Supplementary material can be found on the NIHR Journals Library report project page (www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419807/#/documentation).

Supplementary material has been provided by the authors to support the report and any files provided at submission will have been seen by peer reviewers, but not extensively reviewed. Any supplementary material provided at a later stage in the process may not have been peer reviewed.

List of abbreviations

AMED	Allied and Complementary Medicine Database	GRADE-CERQual	Grading of Recommendations Assessment, Development and Evaluation Confidence in the Evidence from Reviews of Qualitative research
CASP	Critical Appraisal Skills Programme		
CINAHL	Cumulative Index to Nursing and Allied Health Literature	HCP	health-care professional
ConQual	establishing confidence in the output of qualitative research synthesis	HSDR	Health Services and Delivery Research
GP	general practitioner	QES	qualitative evidence synthesis

Plain English summary

Chronic pain is pain that persists long after the time when one would expect to get better. People with chronic pain do not always feel that they are being listened to or valued by health-care professionals (HCPs). We wanted to understand and improve this experience by finding out how HCPs felt about providing health care to people with chronic non-malignant pain. We did this by bringing together the published qualitative research exploring HCPs' experiences. Qualitative research often uses in-depth interviews with individuals, or groups, to explore different perspectives. This study provides a distilled form of knowledge for practitioners, policy-makers and patients, which can help us to understand and improve the experience for patients with chronic pain. We worked alongside an advisory group that included a mix of patient representatives and HCPs. We also worked with a media agency to produce a short film of our findings, which can be watched online (see *Report Supplementary Material 1*; URL: www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419807/#/documentation; accessed 24 July 2017).

This study brings together the findings from 77 studies exploring the experience of > 1500 HCPs, including doctors, nurses and allied health professionals. We highlight areas that help us to understand why the experience of health care can be difficult for patients and HCPs. Importantly, HCPs can find it challenging if they cannot find a diagnosis for pain and at times this can make them feel sceptical about pain. The findings also suggest that HCPs find it difficult to balance their dual role of keeping a good relationship with the individual patient and representing the health-care system. The ability to support patients to live a valued life with pain is described as a craft that is learnt through experience. We also learnt that, like their patients, HCPs can experience a sense of loss because they cannot solve the problem of pain.

Scientific summary

Background

A recent systematic review of population studies indicates that as many as 28 million adults in the UK are affected by chronic pain (Fayaz A, Croft P, Langford RM, Donaldson LJ, Jones GT. Prevalence of chronic pain in the UK: a systematic review and meta-analysis of population studies. *BMJ Open* 2016;**6**:e010364). They do not always feel valued or believed by health-care professionals (HCPs) and can experience an adversarial struggle in health care. To improve this, we need to understand what it is like for HCPs to provide health care for people with chronic non-malignant pain and why this can develop into an adversarial relationship. There is a large body of qualitative research exploring HCPs' experience of providing health care to people with chronic pain, but there has been no attempt to systematically search for and integrate this knowledge in order to improve health care. Existing research highlights mismatches in patients' and clinicians' experiences. We aimed to use this existing knowledge to help us to improve our understanding of this complex process of health care. Our findings allow us to understand some of the challenges of providing health care for people with chronic non-malignant pain and inform us of how to improve the experience for both HCPs and for people with chronic pain.

Objectives

- To undertake a qualitative evidence synthesis (QES) of qualitative research using meta-ethnography to increase our understanding of what it is like for HCPs to provide health care to people with chronic non-malignant pain and thus inform improvements in the experience and quality of health care.
- To make our findings easily available and accessible through a short film.
- To contribute to the development of methods for QES that aim to bring together qualitative research findings so that health care can be improved.

Data collection

We searched five electronic bibliographic databases (MEDLINE, EMBASE, Cumulative Index to Nursing and Allied Health Literature, PsycINFO and Allied and Complementary Medicine Database) from inception to November 2016. We included studies that explore HCPs' experiences of providing health care to people with chronic non-malignant pain. We included a combination of medical subject heading and free-text terms adapted from the InterTASC Information Specialists' Sub-Group search filter resource. We screened the titles, abstracts and full texts of potential studies for relevance and used methods of quality appraisal to frame our discussions. We utilised the Grading of Recommendations Assessment, Development and Evaluation Confidence in the Evidence from Reviews of Qualitative research (GRADE-CERQual) framework to rate our confidence in the review findings.

Analysis

We used the methods of meta-ethnography developed by Noblit and Hare (Noblit G, Hare R. *Meta-Ethnography: Synthesising Qualitative Studies*. California, CA: Sage Publications; 1988) and recently refined for larger studies by Toye and colleagues (Toye F, Seers K, Allcock N, Briggs M, Carr E, Barker K. Meta-ethnography 25 years on: challenges and insights for synthesising a large number of qualitative studies. *BMC Med Res Methodol* 2014;**14**:80). Meta-ethnography involves identifying concepts from the studies included and progressively abstracting these concepts into a line of argument, or conceptual model. We used qualitative analysis software to assist in the organisation of the analysis.

Patient and public involvement

The study design, analysis and dissemination plan were developed in collaboration with an advisory group that included patients and HCPs.

Research findings

We screened 954 abstracts and 184 full texts and included 77 published studies reporting the experiences of > 1551 national and international HCPs, including doctors, nurses and allied health professionals. We abstracted six themes that help us to understand HCPs' experiences of providing health care to people with chronic non-malignant pain: (1) a sceptical cultural lens and the siren song of diagnosis; (2) navigating juxtaposed models of medicine; (3) navigating the patient–clinician borderland; (4) the challenge of dual advocacy; (5) personal costs; and (6) the craft of pain management. We produced a short film that presents these themes, 'Struggling to support people to live a valued life with chronic pain', which is available on YouTube (YouTube, LLC, San Bruno, CA, USA) (see *Report Supplementary Material 1*; URL: www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419807/#/documentation; accessed 24 July 2017). We also developed a conceptual model that helps us to understand the complexity of providing health care to people with chronic non-malignant pain. The innovation of this conceptual model is to propose a series of tensions that are integral to the experience of providing health care to people with chronic non-malignant pain, between a dualistic biomedical model and an embodied psychosocial model; professional distance and proximity; professional expertise and patient empowerment; the need to make concessions to maintain therapeutic relationships and the need for evidence-based utility; and patient advocacy and health-care system advocacy. *Figure a* illustrates the tensions that underpin our conceptual model. This model may be transferable to other chronic conditions and potentially be useful for HCPs treating other conditions that do not comfortably fit the biomedical model (e.g. fatigue and unexplained symptoms). Our findings demonstrate that these tensions underpin HCPs' experience of providing health care to people with chronic non-malignant pain and can contribute to an adversarial relationship. Importantly, HCPs navigate towards the biomedical model and siren song of diagnosis. HCPs can find it challenging to provide health care to people with chronic non-malignant pain because they feel that they have failed in their professional duty to find and fix a medical problem.

The biopsychosocial model is a model used in chronic pain management that recognises that the experience of pain is the result of a complex relationship between biological and psychosocial factors. Our findings indicate that even when HCPs advocate a biopsychosocial model, for some the model remains dualistic at its core. This can mean that HCPs make an abrupt shift towards psychosocial explanations when they cannot find a biomedical explanation. Our findings also indicate that, from the outset, during the first consultation, some HCPs utilise a more embodied biopsychosocial approach and focus on understanding the lived experience of pain alongside efforts to define pain in biomedical terms. Embodiment focuses on unique personal meaning that can be understood only in the individual's social, cultural and historical context. At times, HCPs who focus on gaining an embodied understanding can feel 'bombarded by despair'. However, there is a sense that, although it can impose a personal burden, this embodied approach can also be rewarding for both the patient and the professional. This embodied approach might also help to reduce the sense of professional failure that comes from the desire to find a medical solution. The findings also indicate the complexity of navigating the interface between the professional and the patient. HCPs can find it difficult to balance the dual role of representing the health-care system and at the same time maintain an effective therapeutic relationship with individual patients. The ability to successfully manage patients with chronic pain is described as a craft that is learnt through experience. At times, HCPs can feel underskilled in chronic pain management. We also identify themes to help us understand the experience of prescribing opioids. These themes are underpinned by the ambiguity surrounding opioid prescription for chronic non-malignant pain and they highlight the complexity for HCPs of managing chronic non-malignant pain.

We rate our confidence in the review findings as moderate to high and comment on the utility of GRADE-CERQual for determining confidence in qualitative syntheses. We also outline criteria that might help reviewers to consider which studies to include in future qualitative syntheses.



FIGURE a Conceptual model: complexity of providing health care to people with chronic non-malignant pain. Reproduced from Toye F, Seers K, Barker KL. Meta-ethnography to understand healthcare professionals' experience of treating adults with chronic non-malignant pain. *BMJ Open* 2017;7:e018411. This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) license, which permits others to distribute, remix, adapt and build upon this work, for commercial use, provided the original work is properly cited. See: <http://creativecommons.org/licenses/by/4.0/>.

Conclusions

This innovative meta-ethnography reveals, for the first time, that there are many complex tensions that HCPs have to navigate when working with people who have chronic non-malignant pain, and that this experience can be adversarial. Our findings can help us to consider the experience of health care from the perspective of HCPs and to understand the potential tensions that may contribute to this adversarial experience. HCPs can use our conceptual model to help them to think about their encounters with patients with chronic pain. For example:

- Am I making a sudden shift to psychosocial explanations?
- Am I considering psychosocial factors at the outset?
- Do I understand this patient's experience or am I too distant?
- Am I trying to enforce my decisions?
- Am I making a concession and for whose benefit?
- What is the effect of dual advocacy on me and my patient?
- What personal impact is this having on me?
- Am I feeling like I have failed?

We invite HCPs to use our 'mixing console' to help them to think about their encounters with patients. The poles are neither inherently good nor inherently bad, just as bass and treble are neither inherently good nor inherently bad. It is the correct mix within a context that contributes to the quality of music. Our console also incorporates the pitch or level of loss, both professional and personal, that can contribute to the harmony or dissonance of a therapeutic encounter. This console may be transferable to other chronic conditions.

Implications for health care

- The findings indicate an underlying scepticism that might contribute to an adversarial relationship between a patient and their HCP. Believing patients' experiences may provide a more secure foundation for an effective therapeutic relationship.
- The findings indicate a dualistic approach whereby HCPs make a sudden shift from biomedical to biopsychosocial explanations for the pain after exhausting attempts to decipher a diagnosis. This abrupt shift may exacerbate a sense of loss of credibility for patients.
- The findings indicate that some HCPs engage in judgements about what is real or not real that are underpinned by a cultural duality of real (biomedical) and not real (psychosocial).
- The findings suggest that an embodied, rather than a dualistic, biopsychosocial model that focuses on the personal meaning of pain from the outset might help to lessen the adversarial experience and also reduce the HCP's sense of failure.
- The findings have clinical and educational implications. How can we enable HCPs to manage the tensions that underpin the experience of providing health care to people with chronic non-malignant pain? How do we recognise and support the complexity of skills and emotional cost of providing health care to people with chronic non-malignant pain?
- The findings highlight the benefits of reciprocity, mutuality and collaboration between HCPs and the benefits of being able to break down or cross professional boundaries and hierarchies.
- The findings highlight a need to consider the emotional costs to HCPs of providing health care to people with chronic non-malignant pain.

Funding

Funding for this study was provided by the Health Services and Delivery Research programme of the National Institute for Health Research.

Chapter 1 Background

A recent systematic review¹ of population studies indicates that as many as 28 million adults in the UK are affected by chronic pain. Population estimates suggest that around 25% of adults around the world suffer with moderate or severe pain,^{2–6} and for between 6% and 14% of these adults this pain is disabling.^{6,7} We know that living with chronic pain can be challenging and that patients do not always feel valued or believed by health-care professionals (HCPs).⁸ To improve these patients' experiences of health care, we need to understand what is going on from the perspective of the HCP. In particular, we need to understand why it is that working with people with chronic non-malignant pain can result in patients experiencing this as an adversarial relationship. If we can understand what it is like to be a HCP providing health care to people with chronic non-malignant pain, and in particular its challenges and rewards, this understanding can facilitate improvements in the experience and quality of health care for this large group of people.

Chronic pain can be particularly challenging for HCPs to treat because it persists beyond the expected healing time and is not amenable to routine methods of pain control.⁹ This is complicated by the finding that pain is not always explained by a specific pathology.⁶ HCPs find working with patients with chronic pain very complex. For example, HCPs describe feeling 'bombarded by despair' under the pressure of not being able to fix the person in pain.¹⁰ They can also find it a challenge to balance empathy with 'not getting too involved'.¹⁰ Allegretti and colleagues¹¹ describe the challenges for general practitioners (GPs) and highlight mismatches in patients' and clinicians experiences of health care. Others report feelings of frustration and discord in the patient–clinician relationship.¹² It is not uncommon for patients to report dissatisfaction with their HCP interaction and this is likely to influence their decisions and actions.¹³ The rationale for this study is underpinned by the need to facilitate 'patient-centred medicine'.¹⁴ Mead and Bower¹⁵ identified five key dimensions of patient-centred medicine: (1) taking a biopsychosocial perspective; (2) framing the 'patient-as-person'; (3) sharing power and responsibility; (4) therapeutic alliance, which hinges on an effective personal relationship; and (5) 'doctor-as-person', which recognises the influence that HCPs' personal characteristics and responses can have on care. Mead and Bower¹⁵ indicate that patient-centred care requires HCPs to be self-aware of their emotional responses and reactions: 'sensitivity and insight into the reactions of both parties can be used for therapeutic purposes'. Thus, understanding the experience of providing health care to people with chronic non-malignant pain from the perspective of the HCP can have important implications for delivery of health care, decision-making and health-care quality. The findings will allow HCPs and their managers to understand, in detail, the challenges of providing health care to this complex group of patients and, thus, facilitate improvements to the quality of health care. In addition, a mutual understanding of what it is like to provide and receive health care for chronic non-malignant pain can facilitate a therapeutic partnership from the perspective of both patients and their HCPs.

The aim of qualitative evidence synthesis (QES) in health care is to systematically review and integrate findings in order to increase our understanding of the complex processes of health care and, thus, improve the experience and quality of that care. The proliferation of qualitative studies can make it difficult to access and utilise qualitative knowledge to inform practice and policy.¹⁶ The Cochrane Qualitative Research Methods Group acknowledges the importance of including qualitative findings within evidence-based health care,¹⁷ and insights from several meta-ethnographies have contributed to a greater understanding of complex processes in health care, for example medicine-taking,¹⁸ diabetes,¹⁹ antidepressants,²⁰ chronic musculoskeletal pain⁸ and chronic pelvic pain.²¹ There are various methods for synthesising qualitative research.^{16,22–25} An important distinction made in synthesis approaches is between (1) those that aim to describe or 'aggregate' findings and (2) those that aim to interpret these findings and develop conceptual understandings or 'theory'.²⁶ Our aim is to develop conceptual understanding. We will use the methods of meta-ethnography developed, refined and reported by Toye and colleagues⁸ in a previous meta-ethnography of patients' experience of chronic musculoskeletal pain.

Objectives

- To undertake a QES (meta-ethnography)^{26–28} that will increase our understanding of what it is like for HCPs to provide health care to people with chronic non-malignant pain and, thus, to inform improvements in the experience and quality of health care.
- To make our findings easily available and accessible through a short film.
- To contribute to the development of methods for QES that aim to bring together qualitative research findings so that health care can be improved.

Chapter 2 Methods

There are seven stages to meta-ethnography (outlined in *Figure 1*). Stage 1 incorporates the rationale, aims and protocol development. Stage 2 involves deciding what is relevant to the synthesis through a systematic search, screening and appraisal. The analytical stages in meta-ethnography involve overlapping research activities: reading the studies (stage 3), determining how the studies are related (stage 4), translating the studies into each other (stage 5) and synthesising the translations (stage 6). The final stage (stage 7) involves the output and dissemination of findings.

Stage 1: getting started

This stage incorporates the background, rationale, aims and protocol development.

Stage 2: deciding what is relevant

In their original text on meta-ethnography, Noblit and Hare²⁶ do not advocate an exhaustive literature search, and the number of studies included in meta-ethnographies ranges widely.^{22,24,27} The aim of meta-ethnography is not to perform statistical analyses but to draw on knowledge for conceptual development. Some argue that including too many studies makes the analysis 'unwieldy'.^{27,29} However, we aimed to produce a conceptual analysis with a weight of evidence that has resonance with the health research community and thus undertook a systematic search of the published literature. Our previous meta-ethnography has demonstrated the value of undertaking a systematic search and including a larger number of studies into a QES.²⁸

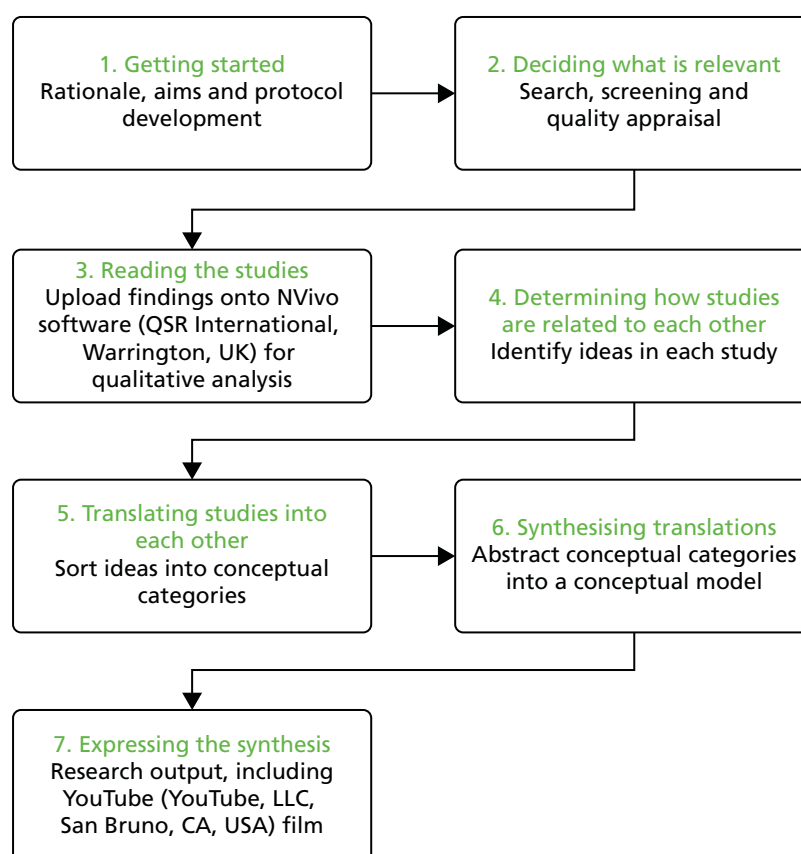


FIGURE 1 The stages of meta-ethnography.

Searching and screening

Inclusions

We included studies that explored HCPs' experiences of providing health care to adults with chronic non-malignant pain.

Exclusions

We excluded studies of acute pain, head pain, arthritis (including osteoarthritis and rheumatoid arthritis) or patient experience, and studies in which HCPs' experiences could not be disentangled from the experiences of others (e.g. patients, carers or family members).

We searched five electronic bibliographic databases [MEDLINE, EMBASE, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsycINFO and Allied and Complementary Medicine Database (AMED)] using terms adapted from the InterTASC Information Specialists' Sub-Group search filter resource.^{30–33} The InterTASC Information Specialists' Sub-Group is a group of information professionals supporting research groups producing technology assessments for the National Institute for Health and Care Excellence (URL: www.york.ac.uk/inst/crd/intertasc/; accessed 24 July 2017).

We developed the search strategy with an information specialist and used a combination of specific subject heading terms and free-text terms (*Table 1*). We did not use the 'clinical query limits' option for qualitative research in our searches, as we had found that this can filter out relevant qualitative studies. To ensure value for money, we did not include citation checks, hand-searching, grey literature or Doctor of Philosophy (PhD) searches. Previous experience has shown us that these strategies do not necessarily add significant conceptual value to large meta-ethnographies.²⁸ Two reviewers screened the titles, abstracts and full texts of potential studies for relevance.

Quality appraisal

Although there are many frameworks suggested for appraising the quality of qualitative research, there is no consensus on what makes a study 'good'.^{27,34} However, a growing number of researchers are appraising studies for the purpose of QES.²⁴

Although we did not intend to use rigid guidelines for determining inclusion, we used three methods of quality appraisal to frame our discussions:

1. The questions developed by the Critical Appraisal Skills Programme (CASP) for appraising qualitative research (*Box 1*).³⁵ We assigned a numerical score to each question to indicate whether we felt that the CASP question (1) had not been addressed, (2) had been addressed partially or (3) had been extensively addressed, thus giving a possible score range of 10–30.⁸ We used the CASP in this way in a previous meta-ethnography of patients' experience of living with chronic non-malignant pain, in which we found that satisfactory papers scored at least 19.⁸
2. A list of seven themes (*Table 2*) developed from a qualitative study embedded in a previous meta-ethnography funded by the Health Services and Delivery Research (HSDR) programme.³⁶ Unlike CASP, these themes were developed specifically for meta-ethnography. For example, CASP does not focus specifically on conceptual clarity as a facet of quality, which is a distinguishing feature of meta-ethnography.
3. We categorised, as suggested by Dixon-Woods and colleagues,³⁴ a 'key paper' that was 'conceptually rich and could potentially make an important contribution to the synthesis'; a 'satisfactory paper'; a paper that is irrelevant to the synthesis; and a paper that is methodologically fatally flawed.

Two reviewers appraised each paper, and if they were unable to reach an agreement the study was sent to a third reviewer for the final decision.

TABLE 1 Search syntax for electronic databases

Database	Terms			
	Qualitative research		Pain	
	Subject heading	Free text	Subject heading	Free text
MEDLINE	ATTITUDE TO HEALTHCARE/ INTERVIEWS AS TOPIC/ FOCUS GROUPS/NURSING METHODOLOGY RESEARCH/ ATTITUDE TO HEALTH	Qualitative ADJ5 (theor* OR study OR studies OR research OR analysis)/ ethno*/emic OR etic/ phenomenolog*/ hermeneutic*/heidegger* OR husserl* OR colaizzi* OR giorgi* OR glaser OR strauss OR (van AND kaam*) OR (van AND manen) OR ricoeur OR spiegelberg* OR merleau/ constant ADJ3 compar*/ focus ADJ3 group*/ grounded ADJ3 (theor* OR study OR studies OR research OR analysis)/ narrative ADJ3 analysis/ discourse ADJ3 analysis/ (lived OR life) ADJ3 experience*/ (theoretical OR purposive) ADJ3 sampl*/ (field ADJ note*) OR (field ADJ record*) OR fieldnote*/	BACK PAIN/CHRONIC PAIN/PAIN/PAIN MANAGEMENT/ FIBROMYALGIA/	(chronic* OR persistent* OR long-stand* OR longstand* OR unexplain* OR un-explain*) ADJ5 pain
PsycINFO	QUALITATIVE RESEARCH/ INTERVIEWS/GROUP DISCUSSION/GROUNDED THEORY/CONTENT ANALYSIS/LIFE EXPERIENCES/ PHENOMENOLOGY/ ETHNOGRAPHY/		CHRONIC PAIN/LOW BACK PAIN/ MUSCULOSKELETAL PAIN/PAIN/PAIN CLINIC/BACKACHE/ FIBROMYALGIA/	Fibromyalgia 'back ache' OR back-ache OR backache
EMBASE	QUALITATIVE RESEARCH/ QUALITATIVE RESEARCH/ PHENOMENOLOGY/ PERSONAL EXPERIENCE/ ATTITUDE		BACK PAIN/CHRONIC PAIN/LOW BACK PAIN/ MUSCULOSKELETAL PAIN/PAIN/PAIN CLINICS/ FIBROMYALGIA/PAIN MANAGEMENT/	'pain clinic' OR pain-clinic* pain adj5 syndrome*
CINAHL	QUALITATIVE STUDIES/ QUALITATIVE VALIDITY/ PHENOMENOLOGY/ PHENOMENOLOGICAL RESEARCH/ETHNOGRAPHIC RESEARCH/ANTHROPOLOGY, CULTURAL/OBSERVATIONAL METHODS/PARTICIPANT OBSERVATION/LIFE EXPERIENCES/LIFE HISTORIES/ ATTITUDE TO LIFE/ ETHNOLOGICAL RESEARCH/ ETHNONURSING RESEARCH/ NATURALISTIC INQUIRY/ FOCUS GROUPS/GROUNDED THEORY/PURPOSIVE SAMPLE/ THEORETICAL SAMPLE/ SNOWBALL SAMPLE/FIELD STUDIES/FIELD NOTES/ CONSTANT COMPARATIVE METHOD/CONTENT ANALYSIS/DISCOURSE ANALYSIS/THEMATIC ANALYSIS/	participant* ADJ3 observ*/ action ADJ research (digital ADJ record) OR audiorecord* OR co AND operative AND inquir* /co-operative AND inquir* (semi-structured OR semistructured OR unstructured OR structured) ADJ3 interview*/(informal OR in-depth OR indepth OR 'in depth') ADJ3 interview*/ (face-to-face' OR 'face to face') ADJ3 interview*/'IPA' OR 'interpretative phenomenological analysis'/ 'appreciative inquiry'	PAIN/PAIN CLINICS/ CHRONIC PAIN/ FIBROMYALGIA/PAIN CLINICS/	
AMED	ATTITUDE/INTERVIEWS/	social AND construct*/ poststructural* OR (post structural*) OR post-structural* /postmodern* OR (post modern*) OR post-modern*/ feminis*/humanistic OR existential OR experiential	PAIN/FIBROMYALGIA/ BACKACHE/	

BOX 1 Critical Appraisal Skills Programme questions³⁵

1. Was there a clear statement of the aims of the research?
2. Is a qualitative methodology appropriate?
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research?
5. Were the data collected in a way that addressed the research issue?
6. Has the relationship between researcher and participants been adequately considered?
7. Have ethical issues been taken into consideration?
8. Was the data analysis sufficiently rigorous?
9. Is there a clear statement of findings?
10. How valuable is the research?

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TABLE 2 Themes developed from a qualitative study embedded in a previous meta-ethnography funded by the HSDR programme

Question	Response
1. Is the background/rationale/aim described?	Yes/no/not clear
2. Is the sample described?	Yes/no/not clear
3. Is the researcher's perspective clear	Yes/no
4. Has the researcher challenged their own interpretation?	Yes/no/not clear
5. Does the researcher's interpretation come from the original data?	Yes/not clear
6. Can you identify the ideas in this study (or do you find yourself recoding)?	Yes/no/not always
7. Has this changed your thinking/made you think? (Describe in what way)	Yes/no

GRADE-CERQual

We also utilised the Grading of Recommendations Assessment, Development and Evaluation Confidence in the Evidence from Reviews of Qualitative research (GRADE-CERQual) framework³⁷ (URL: www.cerqual.org/; accessed 24 July 2017), which aims to help reviewers to assess and describe how much confidence readers can place in review findings, in other words 'the extent to which the review finding is a reasonable representation of the phenomenon of interest'.³⁷ GRADE-CERQual proposes four distinct areas to rate for each review finding before assessing overall confidence. We aimed to explore how these domains were useful in assessing the confidence in a conceptual QES.

Methodological limitations

In GRADE-CERQual, methodological limitations are the 'extent to which there are problems in the design or conduct of the primary studies that contributed evidence to a review'.³⁷ Reviewers are required to provide an evaluation of the methodological quality of the studies supporting each of the review findings.

Relevance

In GRADE-CERQual, relevance is the 'extent to which the body of evidence from the primary studies supporting a review finding is applicable to the context specified in the review question'.³⁷ Reviewers are required to provide an evaluation of the relevance of the studies supporting each of the review findings.

Adequacy of data

In GRADE-CERQual, adequacy of data is an 'overall determination of the degree of richness and quantity of data supporting a review finding'.³⁷ Rich data provide 'sufficient detail to gain an understanding of the phenomenon we are studying'.³⁷ Reviewers should describe the adequacy of data for each finding.

Coherence

In GRADE-CERQual, coherence considers whether or not the finding is well grounded in the primary studies. Reviewers should demonstrate that there has been no 'attempt to create findings that appear more coherent through ignoring or minimising important disconfirming cases',³⁷ in other words demonstrate that they are not cherry-picking evidence to support an a priori concept. They should describe consistency and inconsistency along with possible explanations for any variations found across studies or cases.

Overall confidence

Finally, GRADE-CERQual reviewers give an overall rating of confidence for each individual review finding. The suggested ratings are high, moderate, low or very low. Lewin and colleagues³⁷ indicate that 'it may be difficult to achieve "high confidence" for review findings in many areas, as the underlying studies often reveal methodological limitations or there are concerns regarding the adequacy of the data'.

Stage 3: reading the studies

This stage of meta-ethnography involves thoroughly reading and re-reading the studies to identify and describe the ideas or concepts.²⁶ The raw data of meta-ethnography are ideas or concepts in the primary studies. To allow us to refer to the original studies, we uploaded the study findings onto NVivo 11 software (QSR International, Warrington, UK) for qualitative analysis. NVivo is particularly useful for collaborative analysis as it allows the team to keep a record and compare the reviewers' unique interpretations. NVivo 11 also allows the researchers to write memos and link them to data in order to keep track of developing analysis. We maintained a Microsoft Excel® database (Microsoft Corporation, Redmond, WA, USA) of study demographics, appraisal and decisions on inclusion or exclusion. We read the studies in batches related to the topic/professional group and in the order in which they were retrieved, and did not use an index paper. In other meta-ethnographies, for example those of Campbell and colleagues,²⁷ researchers have used an index paper as a way of 'orienting the synthesis'.³⁸ In these examples, concepts from an early or index paper are used for comparison with concepts from subsequent studies. However, we felt that there were methodological issues with using an index paper:

- How do we decide which paper to use as an index paper?
- How do we define a 'classic' paper with no consensus about what makes a study good?
- An index paper can have a dramatic effect on the resulting interpretation.
- Using an index paper can mean that we become constrained by a priori concepts. This is important because we will not necessarily find the conceptually rich papers first. The process of searching and analysing is iterative and analysis does not start when the full body of data is collected but continues alongside data collection.
- When synthesising a large number of studies, comparing concepts across these studies from an index paper can become unwieldy.

Stage 4: determining how studies are related to each other

Determining how studies are related to each other involves creating 'a list of key metaphors, phrases, ideas and/or concepts' (p. 28).²⁶ The purpose of careful reading in meta-ethnography is to identify and describe the 'metaphors'/ideas/concepts in each study and 'translate' or compare them to those found in other studies. This is fundamental to meta-ethnography because concepts are the raw data of the synthesis. However, at times it can be a challenge to decipher the concepts from primary studies.³⁶ Two reviewers read each paper to identify and describe the concepts and compiled a list of concepts from the original papers. Our analysis was based on clearly articulated concepts from the originating papers. Schütz³⁹ distinguishes

between (1) first-order constructs (the participants' 'common sense' interpretations in their own words) and (2) second-order constructs (the researchers' interpretations of first-order constructs). In meta-ethnography, the 'data' are second-order constructs that are further abstracted to develop third-order constructs (reviewer's interpretations of second-order constructs). However, the distinction between first- and second-order constructs is not clear-cut:⁴⁰ primary authors choose narrative exemplars to illustrate a second-order construct. Meta-ethnography attempts to identify themes not from original narrative data but from the reported concepts. We did not recode narrative data as any attempt to recode is not embedded in the primary research process. Rather, we excluded data from analysis if both reviewers could not decipher a clear concept.

Owing to the scale of the study and the potential number of second-order constructs, our interpretation of each concept needed to combine clarity, precision and brevity. We therefore used a combination of the author's description of the second-order construct (which briefly and clearly described the construct), and our interpretation of the construct (if the original was unclear or lengthy). In some cases, we found that there was a section of narrative exemplar provided by the original authors that was enough to give the essence of the concept. Our aim was to compile a list of concise interpretations of second-order constructs that were grounded in the primary studies.

Stage 5: translating studies into each other

The next stage in meta-ethnography involves exploring how the concepts are related to each other and, thus, sorting concepts into conceptual categories.²⁶ All three reviewers organised, discussed and then reorganised the concepts into categories. 'Translation' is achieved through the constant comparative method⁴¹ through which the reviewers begin to see similarities and differences and organise concepts into further abstracted conceptual categories.

Stage 6: synthesising translations

The next stage of meta-ethnography is to synthesise, or make sense of, the conceptual categories by developing overarching themes and integrating these themes into a conceptual model. This is part of an ongoing process in which findings are further abstracted to form a conceptual framework. We planned to develop a line-of-argument synthesis, which involves 'making a whole into something more than the parts alone imply' (p. 28).²⁶ In our experience of performing large meta-ethnographies, a line of argument can incorporate reciprocity and refutation into a useful conceptual model. This is achieved by constantly comparing concepts and developing 'a grounded theory that puts the similarities and differences between studies into interpretive order' (p. 64).²⁶ We described and printed conceptual categories on postcards and sent these to our advisory group members to read and sort into thematic groups. Then, during the next advisory group workshop, members formed small groups to discuss and reorganise the postcards together. Each of the groups then chose a spokesperson to describe its themes. The complete advisory group then discussed and agreed on the final overarching themes. The aim of the workshop was to develop thematic groups that would underpin a conceptual model. Once the thematic groups had been finalised at the advisory group meeting, all three reviewers discussed and agreed on a conceptual model that they felt was greater than the sum of the individual themes.

Stage 7: expressing the synthesis

The final stage of meta-ethnography involves output and dissemination of findings. Our outputs included a short YouTube film (YouTube, LLC, San Bruno, CA, USA) (see *Report Supplementary Material 1*; URL: www.journalslibrary.nihr.ac.uk/programmes/hedr/1419807/#/documentation). The script for the film was woven together from narrative exemplars from the primary studies to illustrate each overarching theme. The reviewers worked closely alongside a media company, RedBalloon (URL: www.redballoon.co.uk/; accessed 24 July 2017), which specialises in outputs from qualitative research. The team had worked successfully together to produce a film from a previous HSDR-funded meta-ethnography that explores patients' experiences of living with chronic musculoskeletal pain (www.youtube.com/watch?v=FPpu7dXJFRI; accessed 24 July 2017).

Chapter 3 Findings

This is a full report of findings reported in Toye and colleagues⁴² (Reproduced from Toye *et al.*⁴² This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) license, which permits others to distribute, remix, adapt and build upon this work, for commercial use, provided the original work is properly cited. See: <http://creativecommons.org/licenses/by/4.0/>) and Toye and colleagues⁴³ (Reproduced from Toye *et al.*⁴³ This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) license, which permits others to distribute, remix, adapt and build upon this work, for commercial use, provided the original work is properly cited. See: <http://creativecommons.org/licenses/by/4.0/>).

Search results

The results of the systematic search are shown in *Figure 2*. We screened 954 potentially relevant studies and excluded 770 after screening the abstracts. We retrieved 184 full-text articles and excluded 101 for the following reasons:

- not about chronic pain^{12,44–87}
- did not include HCP voice^{88–100}
- not qualitative, or limited qualitative data^{101–116}
- out of scope^{117–143}

Of the 83 potential studies, we unanimously excluded six on the grounds of methodological report.^{144–149} We included 77 published studies reporting the experiences of > 1551 HCPs.^{11,150–225} *Table 3* provides the author, year of publication, professional/topic group, geographical context, number of participants, data collection and analytical methods for each study. HCPs included a diversity of doctors, nurses and allied health professionals in various contexts and geographical locations. Not all of the studies reported the number of participants from specific professional groups, which meant that it was not possible to give the exact sample number from each profession. The majority of studies were from the USA, the UK, Canada and Sweden. The sample size from the studies ranged from 6 to 103 (average 22). One focus group study¹⁶⁵ and three ethnographic studies^{156,200,223} did not report their sample size.

Quality assessment and inclusion

Table 4 provides the outcome of appraisal: the CASP score from each reviewer [from 10 (low) to 30 (high)]; the difference in CASP score between reviewers; the seven themes developed from a previous meta-ethnography;⁸ the global quality score (key, satisfactory, uncertain, irrelevant or fatal flaw); and reviewers' assessment of potential value based on CASP question 10 ('how valuable is the research?'). The difference in CASP score between two reviewers ranged from –4 to 2 (a possible score of 10–30). They did not agree about the inclusion of four studies,^{172,178,196,201} which were subsequently included by a third reviewer. Two reviewers agreed that 89% of primary authors had reported their study aim and 84% had described their sample. They agreed that 89% of the authors had not reported their perspective and its potential influence on findings and 69% had not reported methods for challenging their interpretation. Reviewers also agreed that only 65% of authors had provided clear examples to demonstrate that their findings were drawn from the data and only 55% of authors had clearly described all their findings. Twenty-eight studies^{11,150,151,153,154,156,157,159,165–167,174,176,179,187,190,195,204,207–209,211–214,221–223} were reported as having 'changed the thinking' of at least one reviewer. However, reviewers' appraisal comments (see *Appendix 1*) suggested that, even if they did not change their thinking, the primary studies encouraged reviewers to think. Two reviewers unanimously appraised five studies^{150,151,214,222,223}

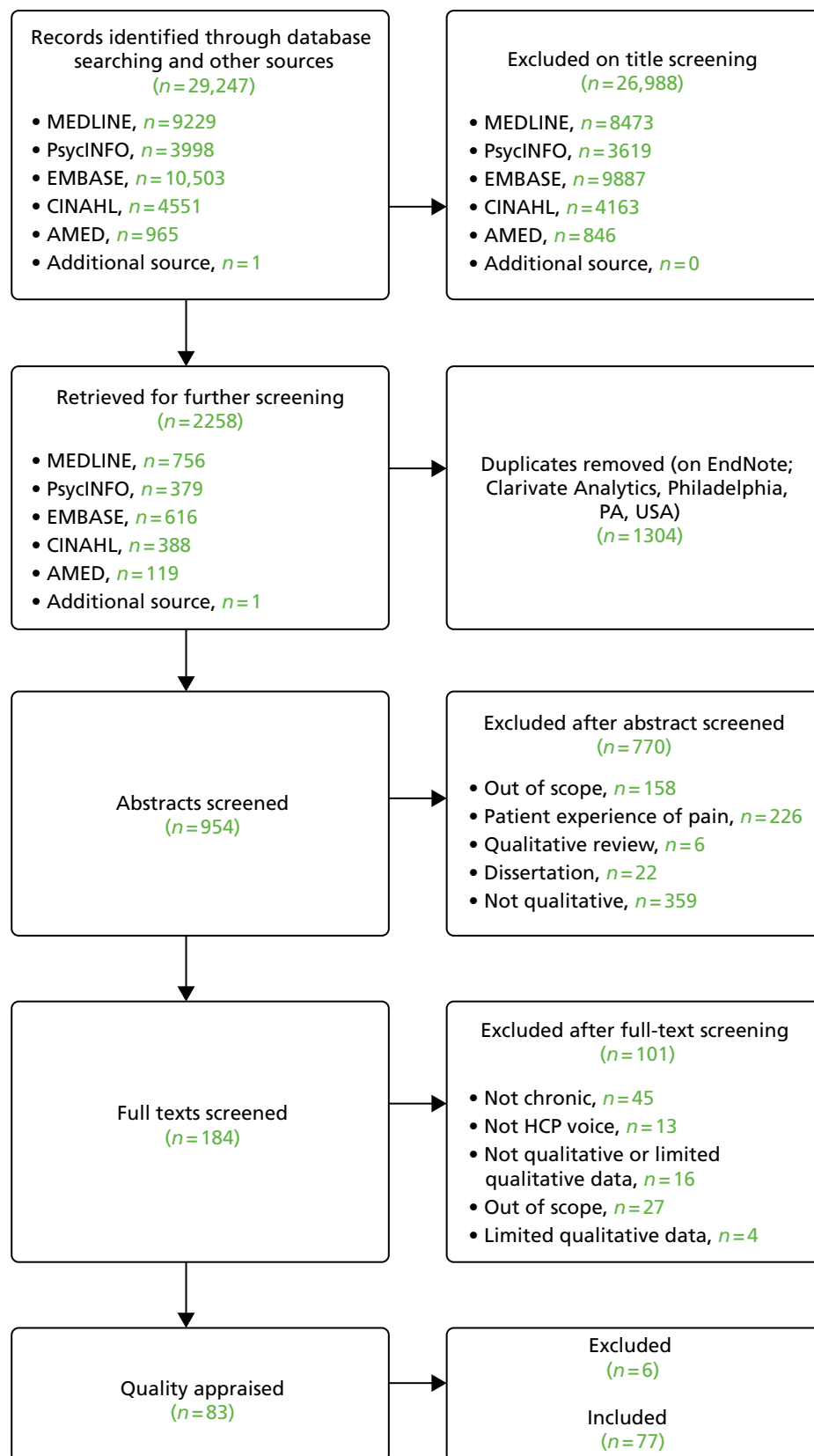


FIGURE 2 Systematic search results.

TABLE 3 Geographical setting, sample size, data collection method, analytical approach and professional group/topic of included studies

First author and year	Location	n	Data collection	Analytical approach	Professional group/topic
Afrell 2010 ¹⁵¹	Norway	6	Focus groups	Phenomenology	Specialist physiotherapists
Allegretti 2010 ¹¹	USA	13	Semistructured interview	Immersion–crystallisation	Primary care physicians/GPs
Åsbring 2003 ¹⁵²	Sweden	26	Semistructured interview	Grounded theory	Fibromyalgia
^a Baldacchino 2010 ¹⁵³	UK	29	Focus groups and interviews	Framework analysis	Opioid prescription
Barker 2015 ¹⁵⁴	UK	7	Semistructured interviews	Action research	Specialist physiotherapists
^a Barry 2010 ¹⁵⁵	USA	23	Semistructured interview	Grounded theory	Opioid prescription
Baszanger 1992 ¹⁵⁶	France	NK	Ethnography	Grounded theory	Chronic pain services
^a Berg 2009 ¹⁵⁷	USA	16	Semistructured interview	Thematic analysis	Opioid prescription
Bergman 2013 ¹⁵⁸	USA	14	Interviews	Thematic analysis	Primary care physicians/GPs
Blomberg 2008 ¹⁵⁹	Sweden	20	Focus groups	Grounded theory	Nursing
Blomqvist 2003 ¹⁶⁰	Sweden	52	Interviews	Content analysis	Older adults
^a Briones-Vozmediano 2013 ¹⁶¹	Spain	9	Semistructured interview	Discourse analysis	Fibromyalgia
Cameron 2015 ¹⁶²	UK	13	Semistructured telephone interviews	Thematic analysis	Older adults
Cartmill 2011 ¹⁶³	Canada	10	Semistructured interview	Grounded theory	Chronic pain services
Chew-Graham 1999 ¹⁶⁴	UK	20	Semistructured interview	Grounded theory	Primary care physicians/GPs
Clark 2004 ¹⁶⁵	USA	NK	Focus groups	Ethnography	Pain in aged care facilities
Clark 2006 ¹⁶⁶	USA	103	Semistructured interviews	Content analysis	Pain in aged care facilities
Côté 2001 ¹⁶⁷	Canada	30	Focus groups	Thematic analysis	Pain-related work disability
Coutu 2013 ¹⁶⁸	Canada	5	Semistructured interviews	Thematic analysis	Pain-related work disability
Dahan 2007 ¹⁶⁹	Israel	38	Focus groups	Immersion–crystallisation	Guidelines
Daykin 2004 ¹⁷⁰	UK	6	Semistructured interviews	Grounded theory	Physiotherapists
Dobbs 2014 ¹⁷¹	USA	28	Focus groups	Content analysis	Pain in aged care facilities
Eccleston 1997 ¹⁷²	UK	11	Q-analysis	Q-analysis	Mixed professionals
Espeland 2003 ¹⁷³	Norway	13	Focus groups	Phenomenology	Guidelines
^a Esquibel 2014 ¹⁷⁴	USA	21	Interviews	Immersion–crystallisation	Opioid prescription
^a Fontana 2008 ¹⁷⁵	USA	9	Semistructured interview	Emancipatory research	Opioid prescription
Fox 2004 ¹⁷⁶	Canada	54	Focus groups	Thematic analysis	Pain in aged care facilities

continued

TABLE 3 Geographical setting, sample size, data collection method, analytical approach and professional group/topic of included studies (*continued*)

First author and year	Location	n	Data collection	Analytical approach	Professional group/topic
^a Gooberman-Hill 2011 ¹⁷⁷	UK	27	Semistructured interview	Thematic analysis	Opioid prescription
Gropelli 2013 ¹⁷⁸	USA	16	Semistructured interviews	Content analysis	Pain in aged care facilities
Hansson 2001 ¹⁷⁹	Sweden	4	Interviews	Grounded theory	Pain-related work disability
Harting 2009 ¹⁸⁰	The Netherlands	30	Focus groups	Content analysis	Guidelines
Hayes 2010 ¹⁸¹	Canada	32	Focus groups and interviews	Grounded theory	Fibromyalgia
Hellman 2015 ¹⁸²	Sweden	15	Semistructured interviews	Thematic analysis	Pain-related work disability
Hellström 1998 ¹⁸³	Sweden	20	Interviews	Phenomenology	Fibromyalgia
Holloway 2009 ¹⁸⁴	Australia	6	Semistructured interviews	Constant comparison	Pain in aged care facilities
^a Holloway 2009 ¹⁸⁵	Australia	6	Semistructured interviews	Constant comparison	Pain in aged care facilities
Howarth 2012 ¹⁸⁶	UK	9	Interviews and focus groups	Grounded theory	Chronic pain services
^a Kaasalainen 2007 ¹⁸⁷	Canada	66	Interviews and focus groups	Grounded theory	Pain in aged care facilities
Kaasalainen 2010 ¹⁸⁸	Canada	NK	Interviews and focus groups	Thematic analysis	Pain in aged care facilities
^a Kaasalainen 2010 ¹⁸⁹	Canada	53	Interviews and focus groups	Case study analysis	Pain in aged care facilities
^a Kilaru 2014 ¹⁹⁰	USA	61	Semistructured interview	Grounded theory	Opioid prescription
^a Krebs 2014 ¹⁹¹	USA	14	Semistructured interview	Immersion–crystallisation	Opioid prescription
Kristiansson 2011 ¹⁹²	Sweden	5	Interviews	Narrative analysis	Primary care physicians/GPs
Liu 2014 ¹⁹³	Hong Kong	49	Interviews and focus groups	Content analysis	Pain in aged care facilities
Löckenhoff 2013 ¹⁹⁴	USA	44	Focus groups	Content analysis	Mixed HCPs
Lundh 2004 ¹⁹⁵	Sweden	14	Focus groups	Constant comparison	Primary care physicians/GPs
MacNeela 2010 ¹⁹⁶	Ireland	12	Critical incident interview	Thematic analysis	Primary care physicians/GPs
McConigley 2008 ¹⁹⁷	Australia	34	Interviews and focus groups	Thematic analysis	Pain in aged care facilities
^a McCrorie 2015 ¹⁹⁸	UK	15	Focus groups	Grounded theory	Opioid prescription
Mentes 2004 ¹⁹⁹	USA	11	Semistructured interviews	Thematic analysis	Pain in aged care facilities
O'Connor 2015 ²⁰⁰	USA	NK	Ethnography	Constant comparison	Chronic pain services
Øien 2011 ²⁰¹	Norway	6	Interviews, focus groups, observation	Case study	Physiotherapists
Oosterhof 2014 ²⁰²	The Netherlands	10	Interviews and observation	Thematic analysis	Chronic pain services

TABLE 3 Geographical setting, sample size, data collection method, analytical approach and professional group/topic of included studies (*continued*)

First author and year	Location	n	Data collection	Analytical approach	Professional group/topic
Parsons 2012 ²⁰³	UK	19	Semistructured interviews	Framework analysis	Mixed professionals
Patel 2008 ²⁰⁴	UK	18	Semistructured interview	Thematic analysis	Primary care physicians/GPs
^a Patel 2009 ²⁰⁵	UK	18	Semistructured interview	Thematic analysis	Primary care physicians/GPs
Paulson 1999 ²⁰⁶	Sweden	21	Interviews	Phenomenology	Fibromyalgia
Poitras 2011 ²⁰⁷	Canada	9	Semistructured interviews	Thematic analysis	Guidelines
^a Ruiz 2010 ²⁰⁸	USA	21	Focus groups and interviews	Grounded theory	Older adults
Schulte 2010 ²⁰⁹	Germany	10	Semistructured interview	Thematic analysis	Primary care physicians/GPs
Scott-Dempster 2014 ²¹⁰	UK	6	Semistructured interviews	Interpretative phenomenological analysis	Specialist physiotherapists
^a Seamark 2013 ²¹¹	UK	22	Interviews and focus groups	Thematic analysis	Opioid prescription
Shye 1998 ²¹²	USA	22	Focus groups	Immersion–crystallisation	Guidelines
^a Siedlecki 2014 ²¹³	USA	48	Interviews	Grounded theory	Nursing
Slade 2012 ²¹⁴	Australia	23	Focus groups	Grounded theory	Physiotherapists
Sloots 2009 ²¹⁵	The Netherlands	4	Semistructured interviews	Thematic analysis	Chronic pain services
Sloots 2010 ²¹⁶	The Netherlands	10	Semistructured interviews	Thematic analysis	Chronic pain services
^a Spitz 2011 ²¹⁷	USA	26	Focus groups	Thematic analysis	Opioid prescription
^a Starrels 2014 ²¹⁸	USA	28	Telephone interview	Grounded theory	Opioid prescription
Stinson 2013 ²¹⁹	Canada	17	Focus groups	Thematic analysis	Chronic pain services
Thunberg 2001 ¹⁵⁰	Sweden	22	Interviews	Grounded theory	Chronic pain services
Toye 2015 ²²⁰	UK	19	Focus groups	Grounded theory	Mixed professionals
Tveiten 2009 ²²¹	Norway	5	Focus groups	Content analysis	Chronic pain services
Wainwright 2006 ²²²	UK	14	Interviews	Thematic analysis	Primary care physicians/GPs
Wilson 2014 ²²³	UK	NK	Interviews, documents	Ethnography	Guidelines
Wynne-Jones 2014 ²²⁴	UK	17	Semistructured interviews	Constant comparison	Pain-related work disability
Zanini 2014 ²²⁵	Italy	17	Semistructured interviews	Thematic analysis	Chronic pain services

NK, not known.
^a Study contributed to themes on opioid prescription.

TABLE 4 Quality appraisal report

In/out	First author and year	Reviewer 1 CASP score	Reviewer 2 CASP score	Difference between CASP scores	Theme							Global quality and value score (CASP question 10)
					1. Rationale/aim described?	2. Sample described?	3. Researcher's perspective clear?	4. Challenged interpretation?	5. Does interpretation come from the data?	6. Can you identify the ideas?	7. Has this changed your thinking?	
In	Thunberg 2001 ¹⁵⁰	27	27	0	Y	Y	N	Y	Y	N (Y)	Y (N)	KP and V2
In	Slade 2012 ²¹⁴	28	29	-1	Y	Y	N	Y	Y	Y	Y	KP and V2
In	Wainwright 2006 ²²²	28	28	0	Y	Y	N	Y	Y	Y	Y (N)	KP and V2
In	Afrell 2010 ¹⁵¹	29	29	0	Y	Y	N	Y	Y	Y (N)	Y	KP and V2
In	Wilson 2014 ²²³	29	30	-1	Y	Y	N (Y)	Y	Y	Y	Y	KP and V2
In	Tveiten 2009 ²²¹	26	28	-2	Y	N	N	N	Y	Y	Y (N)	SAT and V2
In	Kaasalainen 2007 ¹⁸⁷	27	27	0	Y	Y	N	Y	Y	Y	Y (N)	SAT and V2
In	Kilaru 2014 ¹⁹⁰	27	27	0	Y	N	N	N	Y	Y	Y (N)	SAT and V2
In	Krebs 2014 ¹⁹¹	27	28	-1	Y	Y	N	Y	Y	Y	N	SAT and V2
In	Lundh 2004 ¹⁹⁵	27	29	-2	Y	Y	N	N	Y	Y	N (Y)	SAT and V2
In	Fox 2004 ¹⁷⁶	27	27	0	Y	Y	N	Y	Y	Y	Y	SAT and V2
In	Allegretti 2010 ¹¹	28	29	-1	Y	Y	N	Y	Y	Y	Y	SAT and V2
In	Baszanger 1992 ¹⁵⁶	28	27	1	Y	Y	N	N	N	N	Y (N)	SAT and V2
In	Daykin 2004 ¹⁷⁰	28	28	0	Y	Y	N	Y	Y	Y (N)	N	SAT and V2
In	McCrorie 2015 ¹⁹⁸	28	29	-1	Y	Y	N	Y	Y	Y (N)	N	SAT and V2
In	^a Patel 2008 ²⁰⁴	28	29	-1	Y	Y	N	Y	Y	Y	Y	SAT and V2
In	Zanini 2014 ²²⁵	28	28	0	Y	Y	N	Y	Y	Y	N	SAT and V2
In	Barker 2015 ¹⁵⁴	29	29	0	Y	Y	Y	Y	Y	Y	N (Y)	SAT and V2
In	Berg 2009 ¹⁵⁷	29	29	0	Y	Y	N	Y	Y	Y	Y (N)	SAT and V2
In	Scott-Dempster 2014 ²¹⁰	29	29	0	Y	Y	N	Y	Y	Y	N	SAT and V2
In	Toye 2015 ²²⁰	29	29	0	Y	Y	N	Y	Y	Y	N	SAT and V2
In	Blomqvist 2003 ¹⁶⁰	26	28	-2	Y	Y	N	Y	N	Y	N	SAT and V1
In	Dobbs 2014 ¹⁷¹	27	28	-1	Y	Y	N	Y	Y	Y	N	SAT and V1

In/out	First author and year	Reviewer 1 CASP score	Reviewer 2 CASP score	Difference between CASP scores	Theme							Global quality and value score (CASP question 10)
					1. Rationale/aim described?	2. Sample described?	3. Researcher's perspective clear?	4. Challenged interpretation?	5. Does interpretation come from the data?	6. Can you identify the ideas?	7. Has this changed your thinking?	
In	Seamark 2013 ²¹¹	27	26	1	Y	Y	N	Y	Y	Y	Y (N)	SAT and V1
In	Stinson 2013 ²¹⁹	27	25	2	Y	Y	N	Y	Y	Y	N	SAT and V1
In	^a Patel 2009 ²⁰⁵	28	28	0	Y	Y	N	Y	Y	N	N	SAT and V1
In	Cameron 2015 ¹⁶²	22	22	0	Y	N	N	N	N	N	N	SAT
In	Chew-Graham 1999 ¹⁶⁴	22	23	-1	Y	Y	N	N	N	Y	N	SAT
In	Coutu 2013 ¹⁶⁸	22	21	1	Y	N	N	Y	Y	N	N	SAT
In	Löckenhoff 2013 ¹⁹⁴	22	22	0	N (Y)	Y	N	N	N	N	N	SAT
In	Åsbring 2003 ¹⁵²	23	24	-1	Y	N	N	N	N	Y	N	SAT
In	Shye 1998 ²¹²	23	24	-1	Y	Y	N	N	Y	Y (N)	Y (N)	SAT
In	Siedlecki 2014 ²¹³	23	24	-1	Y	Y	N	N	N	N	Y (N)	SAT
In	Baldacchino 2010 ¹⁵³	24	23	1	Y	N	N	N	Y	Y (N)	Y	SAT
In	Côté 2001 ¹⁶⁷	24	25	-1	Y	Y	N	Y	Y	Y	Y (N)	SAT
In	Hellström 1998 ¹⁸³	24	25	-1	Y	Y	N	N	Y (N)	Y	N	SAT
In	Kristiansson 2011 ¹⁹²	24	24	0	Y	Y	N (Y)	N	N	N	N	SAT
In	Parsons 2012 ²⁰³	24	25	-1	Y	Y	N	Y	Y	Y	N	SAT
In	Fontana 2008 ¹⁷⁵	25	24	1	Y	Y	N	Y	Y	Y	N	SAT
In	Clark 2004 ¹⁶⁵	25	26	-1	Y	Y	N	Y	N	Y	Y	SAT
In	Harting 2009 ¹⁸⁰	25	25	0	Y	Y	N	Y	N	N	N	SAT
In	Hayes 2010 ¹⁸¹	25	26	-1	Y	Y	N	Y	Y	N	N	SAT
In	McConigley 2008 ¹⁹⁷	25	26	-1	Y	Y	N	Y	N	Y (N)	N	SAT
In	Poitras 2011 ²⁰⁷	25	26	-1	Y	Y	N	Y	N	Y	Y (N)	SAT
In	Ruiz 2010 ²⁰⁸	25	25	0	Y	Y	N (Y)	Y	Y	Y	N (Y)	SAT
In	Sloots 2010 ²¹⁶	25	25	0	Y	Y	N	Y	Y	N	N	SAT

continued

TABLE 4 Quality appraisal report (continued)

In/out	First author and year	Reviewer 1 CASP score	Reviewer 2 CASP score	Difference between CASP scores	Theme							Global quality and value score (CASP question 10)
					1. Rationale/aim described?	2. Sample described?	3. Researcher's perspective clear?	4. Challenged interpretation?	5. Does interpretation come from the data?	6. Can you identify the ideas?	7. Has this changed your thinking?	
In	Wynne-Jones 2014 ²²⁴	25	25	0	Y	Y	N	Y	Y	N	N	SAT
In	Bergman 2013 ¹⁵⁸	26	25	1	Y	Y	N (Y)	Y	Y	Y (N)	N	SAT
In	Cartmill 2011 ¹⁶³	26	26	0	Y	Y	N	Y	Y	Y	N	SAT
In	Clark 2006 ¹⁶⁶	26	27	-1	Y	Y	N	Y	Y	Y	Y	SAT
In	Dahan 2007 ¹⁶⁹	26	27	-1	Y	Y	N	Y	Y	N	N	SAT
In	Gooberman-Hill 2011 ¹⁷⁷	26	28	-2	Y	Y	N	Y	Y	N (Y)	N	SAT
In	Hansson 2001 ¹⁷⁹	26	27	-1	Y	Y	N	Y	N (Y)	Y	Y (N)	SAT
In	Holloway 2009 ¹⁸⁴	26	26	0	Y	Y	N	Y	Y	Y	N	SAT
In	Holloway 2009 ¹⁸⁵	26	26	0	Y	Y	N	Y	Y	Y	N	SAT
In	Kaasalainen 2010 ¹⁸⁹	26	27	-1	Y	Y	N	Y	Y	N	N	SAT
In	O'Connor 2015 ²⁰⁰	26	27	-1	Y	Y	N	N	N	Y	N	SAT
In	Schulte 2010 ²⁰⁹	26	27	-1	Y	Y	N (Y)	Y	N	Y	Y (N)	SAT
In	Sloots 2009 ²¹⁵	26	27	-1	Y	Y	N	N (N)	Y	Y	N	SAT
In	Starrels 2014 ²¹⁸	26	27	-1	Y	Y	N	Y	Y	Y	N	SAT
In	Barry 2010 ¹⁵⁵	27	26	1	Y	Y	N	Y	Y	Y	N	SAT
In	Blomberg 2008 ¹⁵⁹	27	28	-1	Y	Y	N	Y	Y	Y	Y (N)	SAT
In	Briones-Vozmediano 2013 ¹⁶¹	27	28	-1	Y	Y	N	Y	Y (N)	Y	N	SAT
In	Espeland 2003 ¹⁷³	27	27	0	Y	Y	Y (N)	Y	Y	N	N	SAT
In	Esquibel 2014 ¹⁷⁴	27	28	-1	Y	Y	N	Y	Y	Y	Y (N)	SAT
In	Hellman 2015 ¹⁸²	27	28	-1	Y	Y	N	Y	Y	Y	N	SAT
In	Howarth 2012 ¹⁸⁶	27	27	0	Y	Y	N	Y	Y	Y	N	SAT

In/out	First author and year	Reviewer 1 CASP score	Reviewer 2 CASP score	Difference between CASP scores	Theme							Global quality and value score (CASP question 10)
					1. Rationale/aim described?	2. Sample described?	3. Researcher's perspective clear?	4. Challenged interpretation?	5. Does interpretation come from the data?	6. Can you identify the ideas?	7. Has this changed your thinking?	
In	Kaasalainen 2010 ¹⁸⁸	27	27	0	Y	Y	N	Y	Y	Y	N	SAT
In	Liu 2014 ¹⁹³	27	28	−1	Y	Y	N	Y	Y	Y (N)	N	SAT
In	Mentes 2004 ¹⁹⁹	27	27	0	Y	Y	N	Y	N	Y	N	SAT
In	Oosterhof 2014 ²⁰²	27	26	1	Y	Y	N (Y)	Y	Y	N	N	SAT
In	Paulson 1999 ²⁰⁶	27	27	0	Y	Y	N	Y	N (Y)	N	N	SAT
In	Spitz 2011 ²¹⁷	27	27	0	Y	Y	N	Y	Y	Y	N	SAT
In	Eccleston 1997 ¹⁷²	20	25	−5	Y (N)	Y	N (Y)	Y (N)	Y	N	N	SAT/FF
In	MacNeela 2010 ¹⁹⁶	21	22	−1	N	N	N	N	N	N	N	SAT/FF
In	Øien 2011 ²⁰¹	23	24	−1	Y	Y	N	Y (N)	N (N)	N (N)	N	SAT/FF
In	Gropelli 2013 ¹⁷⁸	21	21	0	Y	Y	N	N	N	N (N)	N	SAT/FF
Out	Kotarba 1984 ¹⁴⁹	14	13	1	N	N (N)	N	N	N	N (N)	N	FF
Out	Dysvik 2010 ¹⁴⁸	18	17	1	N	N (Y)	N	N (N)	N	N	N	FF
Out	Hadker 2011 ¹⁴⁷	19	19	0	N (Y)	N (Y)	N	N (N)	N	N	N	FF
Out	Schofield 2006 ¹⁴⁴	19	19	0	Y	N	N	N	N	N	N	FF
Out	Crowe 2010 ¹⁴⁶	21	25	−4	N	N	N	N	N	N	N	FF
Out	Corbett 2009 ¹⁴⁵	23	23	0	Y	Y	N	Y	N (Y)	N (N)	N	FF
Out	Corrigan 2011 ¹¹⁶	21	21	0	N (Y)	N (Y)	N	N	N	N (N)	N	Irrelevant
Out	Coutu 2013 ¹⁶⁸	24	25	−1	N (Y)	N	N	N	N (Y)	N	N (N)	Irrelevant

FF, fatally flawed; KP, key paper; N, no; SAT, satisfactory; V1, single reviewer rated 3 for CASP question 10 'how valuable is the research?'; V2, both reviewers rated 3 for CASP question 10 'how valuable is the research?'; Y, yes.

a A study reported in two publications.

Note

Bold text indicates where reviewer scores were different.

TABLE 5 Relevance and aim of included studies

First author and year	Relevance	Study aim
Afrell 2010 ¹⁵¹	Indirect	To find out how physiotherapists experienced the influence of systematically prepared key questioning on their relation to, and understanding of, patients with long-standing pain
Allegretti 2010 ¹¹	Direct	To explore shared experiences among chronic low back pain patients and their physicians
Åsbring 2003 ¹⁵²	Direct	To investigate: <ol style="list-style-type: none"> 1. how physicians describe and categorise patients with chronic fatigue and fibromyalgia 2. what the character of these conditions mean to the physicians in encounters 3. strategies described in these encounters
Baldacchino 2010 ¹⁵³	Direct	To describe physicians' attitudes and experience of prescribing opioids to people with chronic non-cancer pain and a history of substance abuse
Barker 2015 ¹⁵⁴	Direct	To evaluate the implementation of acceptance and commitment therapy to physiotherapy-led pain rehabilitation programme
Barry 2010 ¹⁵⁵	Direct	To examine physicians' attitudes to and experiences of treating chronic non-cancer pain
Baszanger 1992 ¹⁵⁶	Direct	To examine how physicians, specialising in pain medicine, work at deciphering chronic pain
Berg 2009 ¹⁵⁷	Direct	To explore providers' perceptions of ambiguity and then to examine their strategies for making diagnostic and treatment decisions to manage chronic pain among patients on methadone maintenance therapy
Bergman 2013 ¹⁵⁸	Direct	To understand the respective experiences of patients with chronic pain and primary care practitioners communicating with each other about pain management in the primary care setting
Blomberg 2008 ¹⁵⁹	Direct	To explore district nurses' care of chronic pain sufferers and to create a theoretical model that can explain the variation in district nurses' experiences of caring for these patients
Blomqvist 2003 ¹⁶⁰	Direct	To explore nursing and paramedical staff perceptions of older people in persistent pain and their day-to-day management of pain
Briones-Vozmediano 2013 ¹⁶¹	Direct	To explore experiences of fibromyalgia management, namely diagnostic approach, therapeutic management and the health professional-patient relationship
Cameron 2015 ¹⁶²	Direct	To explore current attitudes and approaches to pain management of older adults from the perspectives of HCPs representing multidisciplinary teams
Cartmill 2011 ¹⁶³	Direct	To explore the experience of clinicians during the transition from working as an interdisciplinary team to providing a transdisciplinary model of care in a programme for chronic disabling musculoskeletal pain
Chew-Graham 1999 ¹⁶⁴	Direct	To understand how GPs understood chronic low-back pain, how they approached the consultation and how they conceptualised the management of this problem
Clark 2004 ¹⁶⁵	Indirect	To describe the kinds of pain assessments nursing home staff use with nursing home residents and the characteristics and behaviours of residents that staff consider as they assess pain
Clark 2006 ¹⁶⁶	Indirect	To explore the perceptions of a nursing home staff who participated in a study to develop and evaluate a multifaceted pain management intervention
Côté 2001 ¹⁶⁷	Uncertain	To explore the views of chiropractors about timely return to work, to identify the approaches used and to learn about perspectives on the barriers to, and facilitators of, successful return to work with musculoskeletal disorders
Coutu 2013 ¹⁶⁸	Direct	To define and describe scenarios depicting the differences between clinical judgement, workers' representations of their disability and clinicians' interpretations of these representations
Dahan 2007 ¹⁶⁹	Direct	To identify the barriers to, and facilitators of, the implementation of low-back pain guidelines from family practitioners' perspective

TABLE 5 Relevance and aim of included studies (*continued*)

First author and year	Relevance	Study aim
Daykin 2004 ¹⁷⁰	Direct	To explore physiotherapists' pain beliefs with the purpose of highlighting the nature of their beliefs and the role they played within their management of chronic low-back pain
Dobbs 2014 ¹⁷¹	Direct	To explore: <ol style="list-style-type: none"> 1. communication patterns between nursing home residents and nursing assistants about pain 2. how race/ethnicity influences pain experiences 3. assistants' personal pain experiences that affect empathy
Eccleston 1997 ¹⁷²	Partial	To explore how sense is made of the causes of chronic pain
Espeland 2003 ¹⁷³	Direct	To identify and describe: <ol style="list-style-type: none"> 1. factors GPs consider may affect their decisions about ordering plain radiography for back pain 2. barriers to guideline adherence suggested by such factors
Esquibel 2014 ¹⁷⁴	Direct	To explore the experiences of adults receiving opioid therapy for relief of chronic non-cancer pain and those of their physicians
Fontana 2008 ¹⁷⁵	Direct	To critically examine subjective factors that influence the prescribing practices of registered nurses for patients with chronic non-malignant pain
Fox 2004 ¹⁷⁶	Direct	To identify barriers to the management of pain in long-term care institutions
Gooberman-Hill 2011 ¹⁷⁷	Direct	To explore GPs' opinions about opioids and decision-making processes when prescribing 'strong' opioids for chronic joint pain
Gropelli 2013 ¹⁷⁸	Direct	To determine nurses' perceptions of pain management in older adults in long-term care
Hansson 2001 ¹⁷⁹	Partial	To elucidate life lived with recurrent, spine-related pain and to explore the development from work to disability pension
Harting 2009 ¹⁸⁰	Direct	To gain an in-depth understanding of the determinants of guideline adherence among physical therapists
Hayes 2010 ¹⁸¹	Direct	To explore knowledge and attitudinal challenges affecting optimal care in fibromyalgia
Hellman 2015 ¹⁸²	Partial	To explore and describe health professionals' experience of working with return to work in multimodal rehabilitation for people with non-specific back pain
Hellström 2015 ¹⁸³	Direct	To explore the clinical experiences of doctors when meeting patients with fibromyalgia
^a Holloway 2009 ¹⁸⁴	Direct	To explore the experiences of nursing assistants who work with older people in residential aged care facilities (chronic pain example)
^a Holloway 2009 ¹⁸⁵	Direct	To explore the experiences of nursing assistants who have worked with older people in residential aged care facilities who are in pain
Howarth 2012 ¹⁸⁶	Direct	To explore person-centred care from the perspectives of people with chronic back pain and the interprofessional teams that cared for them
Kaasalainen 2007 ¹⁸⁷	Direct	To explore the decision-making process of pain management of physicians and nurses and how their attitudes affect decisions about prescribing and administering pain medications among older adults in long-term care
Kaasalainen 2010 ¹⁸⁸	Direct	To explore the perceptions of health-care team members (regulated and non-regulated staff) and nurse managers (management staff) regarding the nurse practitioner role in pain management in long-term care
Kaasalainen 2010 ¹⁸⁹	Partial	To: <ol style="list-style-type: none"> 1. explore barriers to pain management in long-term care 2. develop an interprofessional approach to improve pain management in long-term care

continued

TABLE 5 Relevance and aim of included studies (*continued*)

First author and year	Relevance	Study aim
Kilaru 2014 ¹⁹⁰	Direct	To identify key themes regarding emergency physicians' definition, awareness, use and opinions of opioid prescribing guidelines
Krebs 2014 ¹⁹¹	Direct	To understand physicians' and patients' perspectives on recommended opioid management practices and to identify potential barriers to, and facilitators of, guideline-concordant opioid management in primary care
Kristiansson 2011 ¹⁹²	Direct	To understand and illustrate what GPs experience in contact with chronic pain patients and what works and does not work in these consultations
Liu 2014 ¹⁹³	Direct	To explore nursing assistants' roles during the process of pain management for residents
Löckenhoff 2013 ¹⁹⁴	Partial	To examine how perceptions of chronological time influence the management of chronic non-cancer pain in middle-aged and older patients
Lundh 2004 ¹⁹⁵	Direct	To explore and describe what it means to be a GP meeting patients with non-specific muscular pain
MacNeela 2010 ¹⁹⁶	Direct	To examine how GPs represent chronic low-back pain in an applied context, especially in relation to psychosocial care
McConigley 2008 ¹⁹⁷	Indirect	To develop recommendations and a related implementation resource 'toolkit' to facilitate implementation of pain management strategies in Australian residential aged care facilities
McCrorie 2015 ¹⁹⁸	Direct	To understand the processes that bring about and perpetuate the long-term prescribing of opioids for chronic non-cancer pain
Mentes 2004 ¹⁹⁹	Partial	To evaluate whether or not information from family members/friends about patients' lifelong pain behaviour improves pain detection in cognitively impaired residents and to evaluate pain information from caregivers
O'Connor 2015 ²⁰⁰	Direct	To explore patterns of communication and decision-making among clinicians collaborating in the care of challenging patients with chronic low-back pain
Øien 2011 ²⁰¹	Direct	To describe communicative patterns about change in demanding physiotherapy treatment situations
Oosterhof 2014 ²⁰²	Direct	To explore which factors are associated with a successful treatment outcome in chronic pain patients and professionals participating in a multidisciplinary rehabilitation programme
Parsons 2012 ²⁰³	Direct	To explore beliefs about chronic muscular pain and its treatment and how these beliefs influenced care seeking and ultimately the process of care
^a Patel 2008 ²⁰⁴	Direct	To explore GPs' experiences of managing patients with chronic pain from a South Asian community
^a Patel 2009 ²⁰⁵	Direct	To explore the experiences of and needs for management of people from a South Asian community who have chronic pain
Paulson 1999 ²⁰⁶	Direct	To explore the experiences of nurses and physicians in their encounter with men with fibromyalgia
Poitras 2011 ²⁰⁷	Direct	To identify barriers and facilitators related to the use of low-back pain guidelines as perceived by occupational therapists
Ruiz 2010 ²⁰⁸	Direct	To explore the attitudes of primary care practitioners towards chronic non-malignant pain management in older people
Schulte 2010 ²⁰⁹	Direct	To understand the factors that influence whether or not referrals from GPs are made, and at what stage, to specialised pain centres
Scott-Dempster 2014 ²¹⁰	Direct	To explore physiotherapists' experiences of using activity pacing with people with chronic musculoskeletal pain
Seamark 2013 ²¹¹	Direct	To describe the factors influencing GPs' prescribing of strong opioid drugs for chronic non-cancer pain
Shye 1998 ²¹²	Partial	To gain understanding about why a controlled intervention to reduce variability in lumbar spine imaging test rates for low-back pain patients was ineffective
Siedlecki 2014 ²¹³	Partial	To explore and understand nurses' assessment and decision-making behaviours related to the care of patients with chronic pain in the acute care setting

TABLE 5 Relevance and aim of included studies (*continued*)

First author and year	Relevance	Study aim
Slade 2012 ²¹⁴	Direct	To investigate how physiotherapists prescribe exercise for people with non-specific chronic low-back pain in the absence of definitive or differential diagnoses
^a Sluots 2009 ²¹⁵	Direct	To explore which factors lead to tension in the patient–physician interaction in the first consultation by rehabilitation physicians of patients with chronic non-specific low-back pain who are of Turkish and Moroccan origin
^a Sluots 2010 ²¹⁶	Partial	To explore which factors led to dropout in patients of Turkish and Moroccan origin with chronic non-specific low-back pain who participated in a rehabilitation programme
Spitz 2011 ²¹⁷	Direct	To describe primary care providers' experiences of and attitudes towards, as well as perceived barriers to, and facilitators of, prescribing opioids as a treatment for chronic pain among older adults
Starrels 2014 ²¹⁸	Direct	To understand primary care providers' experiences, beliefs and attitudes about using opioid treatment agreements for patients with chronic pain
Stinson 2013 ²¹⁹	Indirect	To explore the information and service needs of young adults with chronic pain to inform the development of a web-based chronic pain self-management programme
Thunberg 2001 ¹⁵⁰	Direct	To explore the way HCPs perceive chronic pain
Toye 2015 ²²⁰	Indirect	To understand the impact on HCPs of watching and discussing a short research-based film about patients' experience of chronic musculoskeletal pain
Tveiten 2009 ²²¹	Direct	To develop knowledge of the dialogue between the health professionals and the patient in the empowerment process at a pain clinic
Wainwright 2006 ²²²	Direct	To explore the dilemma of treating medically explained upper-limb disorders
Wilson 2014 ²²³	Indirect	To understand both the meaning of a clinical practice guideline for the management of non-specific low-back pain and the sociopolitical events associated with it
Wynne-Jones 2014 ²²⁴	Direct	To explore GPs' and physiotherapists' perceptions of sickness certification in patients with musculoskeletal problems
Zanini 2014 ²²⁵	Direct	To identify aspects important to address during a consultation to build a partnership with patients with chronic pain

^a A study reported in two publications.

as 'key papers' and 72 as 'satisfactory' (see *Table 3*). At least one reviewer appraised 26 studies^{11,150,151,154,156,157,160,170,171,176,187,190,191,195,198,204,205,210,211,214,219–223,225} as potentially making a 'valuable' contribution to the analysis. They agreed on 21 of 26 of the valuable studies. To allow readers to evaluate the transferability of findings, *Table 5* shows the reviewers' assessment of relevance (direct, indirect, partial or uncertain) and aim of each study. We rated 60 studies^{11,150,152–164,168–171,173–178,180,181,183–188,190–193,195,196,198,200–211,214,215,217,218,221,222,224,225} as directly relevant, seven^{151,165,166,197,219,220,223} as indirectly relevant, nine^{172,179,182,189,194,199,212,213,216} as partially relevant and one¹⁶⁷ as uncertain.

Coding and conceptual categories

We coded batches of studies in the following order according to topic/professional grouping:

1. Ten studies reported the experiences of primary care physicians/GPs.^{11,158,164,192,195,196,204,205,209,222}
2. Four studies explored the experiences of a mixed group of HCPs.^{172,194,203,220}
3. Three studies explored the experiences of physiotherapists.^{170,201,214}
4. Three studies explored the experiences of physiotherapists specialising in chronic pain management.^{151,154,210}

5. Five studies explored the experiences of a mixed group of HCPs providing health care to people with fibromyalgia.^{152,161,181,183,206}
6. Eleven studies explored the experiences of a mixed group of HCPs working in specialist chronic pain services.^{150,156,163,186,200,202,215,216,219,221,225}
7. Five studies explored the experiences of a mixed group of HCPs working in pain management related to employment.^{167,168,179,182,224}
8. Twelve studies explored the experiences of a mixed group of HCPs prescribing opioids to patients with chronic pain.^{153,155,157,174,175,177,190,191,198,211,217,218}
9. Six studies explored the experiences of a mixed group of HCPs utilising guidelines for chronic pain.^{169,173,180,207,212,223}
10. Three studies explored the experiences of a mixed group of HCPs working with older adults.^{160,162,208}
11. Thirteen studies explored the experiences of a mixed group of HCPs working with older adults in long-term care facilities.^{165,166,171,176,178,184,185,187–189,193,197,199}
12. Two studies explored nurses' experiences of providing health care to people with chronic non-malignant pain.^{159,213}

Appendix 2 provides a coding report of included and excluded concepts. Two reviewers identified 492 potential concepts in 77 primary studies (*Figure 3*). They excluded 115 potential concepts for the following reasons: inadequate conceptualisation (31 concepts in 17 studies^{11,150,155,160,162,169,173,178,181,188,192,196,197,206,208,219}); did not explore HCP experience (18 concepts in seven studies^{168,174,198,202,203,215,223}); and explored a topic with limited transferability beyond a specific context (five concepts in five studies^{166,167,197,208,223}). We agreed that for some topics there were insufficient concepts to allow us to develop robust conceptual categories: return to work (seven concepts in two studies^{167,182}), ethnicity (11 concepts in five studies^{171,204,205,215,216}), gender (seven concepts in one study²⁰⁶) and older people (21 concepts in nine studies^{159,160,162,165,176,187,194,199,208}). Fifteen potential concepts did not fit our developing conceptual analysis (*Table 6*).

All reviewers organised the remaining 377 concepts into 42 conceptual categories. *Table 7* gives an example of one of the conceptual categories ('is the pain real?') and its included concepts. Our description of the concepts that formed the raw data of analysis were a combination of the primary author's description

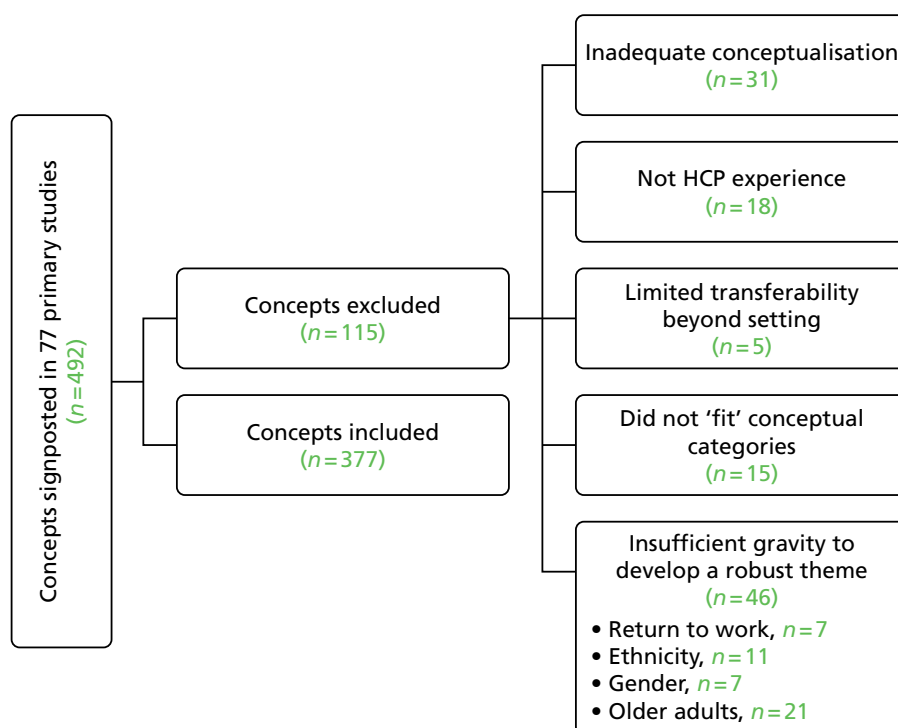


FIGURE 3 Concepts that were included and excluded.

TABLE 6 Concepts that did not fit the conceptual analysis

First author and year: qualitative finding	Description of finding
Barry 2010: ¹⁵⁵ logistical factors – ancillary staff	Physicians expressed concern that they had an insufficient number of qualified staff to implement pain management
Barry 2010: ¹⁵⁵ logistical factors – insurance coverage	Concerns about the logistics of insurance coverage for pain management services and the difficulty in characterising patients' pain status because of restrictions from insurance companies
Fontana 2008: ¹⁷⁵ critical analysis	Conflicts of interest in which the patients' best interests are given a low priority. Nurses did not see prescribing decisions as ethical ones and, as a result, did not recognise the conflicts that were at work when they made these decisions
Holloway 2009: ¹⁸⁴ initiating clinical care	The ability to provide pain management for residents when needed varied considerably between facilities; for some it involved basic care such as emotional support, positioning and using hot-packs, whereas in other facilities they administered pain medication and had responsibility for monitoring the effectiveness of the pain management interventions and documentation
Holloway 2009: ¹⁸⁵ perfect positioning (rewards of getting it right)	Assistants felt sustained and fulfilled by the rewarding aspects of caring. All spoke of their passion for, enjoyment of and love for their work (and this is why they stayed in it). Despite the emotional distress associated with observing people in pain, assistants gained satisfaction from seeing residents relieved of pain. Discussed poor financial remuneration
Kaasalainen 2010: ¹⁸⁸ interactions with long-term care staff and managers	Nurse practitioner was viewed as a nurse with added skills who assisted other health-care team members with managing uncontrolled pain and was often used as an additional resource for nurses
Liu 2014: ¹⁹³ instigator implementing non-pharmacological interventions	Skills in distraction, reassurance and being gentle. Nursing assistants explained how they distracted or reassured residents who were in pain
Löckenhoff 2013: ¹⁹⁴ age differences in time horizons (treatment planning)	Consistently reported that they planned and administered pain management regimens for the long term
Lundh 2004: ¹⁹⁵ variation 1	<i>I can feel very curious! What do these symptoms stand for?</i>
Oosterhof 2014: ²⁰² experiences concerning the treatment outcome (learning new behaviour)	HCPs recognised that change takes effort and a combination of explanation and practice. Some managed to learn and implement new behaviour because they have always been active or because of good body awareness or physical preference. Others find it difficult to keep up effort because of personal problems and poor social support
Scott-Dempster 2014: ²¹⁰ 'It's not a One Trick Pony'	Physiotherapists regarded activity pacing as part of the pain management tool box. Activity pacing was not described as something that was clearly definable or had fixed parameters. Achieving this flexibility could be challenging, as it meant that the physiotherapist had to adapt activity pacing for each individual
Seamark 2013: ²¹¹ cost	Some did not consider cost and prescribed what was needed. Others felt that it was important to bear in mind
Siedlecki 2014: ²¹³ core concepts/taking ownership	Some did not take ownership of the problem and saw it as someone else's problem
Stinson 2013: ²¹⁹ barriers to care (patient-specific barriers)	Difficult to maintain a consistent pain management regimen because of time commitments and reluctance of younger people
Stinson 2013: ²¹⁹ pain management strategies (support systems)	HCPs recognised the importance of peer support for patients

TABLE 7 Example of the conceptual category 'is the pain real?' and its concepts

First author/year and qualitative finding	Description of finding
Åsbring 2003: ¹⁵² illness vs. disease	HCP scepticism for conditions characterised by a lack of objective measurable values that would make it possible to establish cause. Fibromyalgia and chronic fatigue described as illness not disease. There was some doubt regarding this scientific ideal
Åsbring 2003: ¹⁵² moral judgement of illness	Biomedical disease was regarded as more threatening to self than 'illness'. Suggestion that patients think they cannot live with it because they have not experienced something 'really threatening'. An individual who claims to be sick must also look sick to be accepted as such. Sometimes doubted legitimacy of person
Bergman 2013: ¹⁵⁸ acknowledgement of the reality of pain and the search for objective evidence (primary care practitioners)	Search for objective evidence of pain is a crucial part of evaluation (particularly with opioids). Struggled with the dilemma of how to respond in the absence of physical findings. Looked for behavioural and non-verbal cues to indicate presence/absence of pain. Doubted legitimacy in the absence of evidence. Others acknowledged the subjective nature of pain and importance of believing patients
Esquibel 2014: ¹⁷⁴ effect of chronic opioid therapy on doctor–patient relationship – examples of chronic opioid therapy embittering the doctor–patient relationship	Opioid therapy can become the source of conflict and mistrust. Clinical encounters can become largely overshadowed by opioid medication discussion or controversy. Physicians tend to question the validity of their patient's pain and do not approve of opiate pain medication as treatment
Hayes 2010: ¹⁸¹ definition and diagnosis	Questioned the validity of fibromyalgia itself and recognised the impact of this doubt. Doctors did not like clinical situations in which they did not feel in control: <i>The patients tell me with a smile on their lips that they are suffering immensely from all kinds of bodily disorders. How on earth can they look so terribly healthy?</i>
Holloway 2009: ¹⁸⁴ clinical decision-making	Assistants relied on their knowledge of the resident. They spent time with residents and knew their behaviours and moods, so were able to detect changes. They made personal judgements that influenced clinical decisions about pain. Some felt that residents exaggerated pain and changed pain report to 'more appropriate' level
Kaasalainen 2010: ¹⁸⁹ health-care providers	Staff did not always believe residents' reports of pain, or felt that they were overstating their pain. At times, staff felt they needed to 'second guess' the residents' reports
Lundh 2004: ¹⁹⁵ an inconsistent patient	<i>She had ten different symptoms and looked totally healthy! Then you are surprised!</i>
MacNeela 2010: ¹⁹⁶ representing the person's experience (work and legal issues)	Return to work was synonymous with recovery and successful adjustment, but work avoidance and ulterior motives were part of the script for chronic low-back pain. Could highlight doubt and risk rather than person's 'plight': <i>I mean that could be genuine . . . You'd have to be on guard this man isn't laying it on</i>
Siedlecki 2014: ²¹³ nurse characteristics – discernment	Nurses described the importance of knowing their patients to discern appropriate pain management: <i>You can look at that patient and many times what they tell you verbally may not be consistent with what we see . . . they may be very calmly in bed or fall asleep as they're talking to you but they tell you their pain is a 10/12</i>
Stinson 2013: ²¹⁹ barriers to care (societal barriers)	HCPs described the societal tendency to cast doubt on the veracity of chronic pain: <i>This isn't something that people can see and so a lot of people, I think, feel like they're not believed either by their friends or by their family or their health care practitioners um and that is also I guess a big issue</i>

of the second-order construct (in which they briefly and clearly described the construct), and our interpretation of the construct (if the original was unclear or lengthy). In some cases we found that there was a section of narrative exemplar provided by the original authors that adequately described the essence of the concept.

Once the reviewers had agreed on a description of each conceptual category, Fran Toye wrote a statement of this finding in the first person.

For example:

This conceptual category described how endless paperwork eats into HCPs' limited patient time

became:

This endless paperwork eats into my limited patient time.

We have found that writing concepts in the first person is a powerful way for reviewers and their advisory group members to fully engage in the meaning and sentiment of each concept. It also facilitates the use of accessible language for a diverse audience in both analysis and dissemination.

Table 8 provides a description of each of the 42 conceptual categories written in the first person. The reviewers worked with a research fellow and a project advisory group that included patients and HCP members to further abstract these 42 conceptual categories, printed on postcards, into six overarching themes that underpin HCPs' experience of providing health care to people with chronic non-malignant pain (Figure 4). Table 9 provides a list of the conceptual categories underpinning each of the six final themes. Table 10 shows the number of studies and concepts for each theme organised by topic/professional group. It also indicates the global appraisal score given for individual studies supporting the theme.

TABLE 8 Forty-two conceptual categories included in conceptual analysis

Conceptual category title	Description of conceptual category ^a
My professional duty	It is my professional duty to provide the care that I see fit and my patient's duty to follow my professional advice. Professional competence is paramount. Do not let your patient dictate what to do
This endless paperwork takes time	This endless paperwork eats into my limited patient time
It takes time to get to know someone	I need to get to know my patient if I am going to help them, but this takes time. Because my time is restricted I tend to focus on the person's physical body rather than on the person sitting in front of me. Sometimes I even avoid seeing patients with chronic pain
I am my patient's advocate	I am an advocate for my patient and it is my job to mediate between them and other staff and organisations. This advocacy makes our relationship strong but it can come with personal risks of loss or failure
Seeing a fellow human	It is important to get to know my patients, recognise their losses and regard them with dignity. However, I also need to balance the emotional burden that comes with engaging with a fellow human being
The conflicting role of gatekeeper	Being a gatekeeper to other services conflicts with my role as caregiver (GP)
Learning the craft of pain management	You learn to treat chronic pain through experience. My personal experience of pain, my life experience and my professional experience are what make me a good clinician
continued	

TABLE 8 Forty-two conceptual categories included in conceptual analysis (*continued*)

Conceptual category title	Description of conceptual category ^a
We did not learn this in class	I didn't learn how to treat chronic pain in my clinical education. I am underskilled in chronic pain management, particularly psychological strategies and medication
Guidelines: take them or leave them	The guidelines for back pain just give me more paperwork to read. I can take them or leave them
Guidelines: support psychosocial model	The guidelines for back pain are useful because they give weight to a psychosocial explanations rather than overemphasising biomedical explanation
Guidelines: to convince others about my decisions	Sometimes I use the guidelines for back pain to convince patients and other clinicians that I am making the right decision; 'look I am following this to the letter!'
Guidelines: constrain expert knowledge	The guidelines for back pain challenge or even constrain my expert knowledge
Guidelines: prevent individualised care	The guidelines for back pain do not allow me to provide individualised treatment for my patient
Exhausted by the sense of loss	I am a 'helpless helpoholic'. I have a strong yearning to help but am constantly frustrated and disappointed. I am on a hiding to nothing and whatever I do is not enough. I am overwhelmed and exhausted by the sense of loss
A sense of failure	I find it a challenge to alter my professional mandate, which is to diagnose what the problem is and fix it. If I do not fix something I feel that I have failed. 'Difficult patients' are those you cannot fix
I am not a psychologist	I feel a bit uncomfortable treating the 'psychological' aspects of pain (e.g. depression) – is this really my job?
The challenge of biomedical ambiguity	At times I feel a bit anxious because I cannot locate the pain or give it a medical diagnosis. Pain remains ambiguous and hard to explain
It is difficult to access specialist services	It is really difficult to access specialist pain (and addiction) services
What is the point of referring to other services?	My patient did not get what I expected from pain management services. Are they really the experts? They tend to overemphasise medication. What are they offering that I cannot provide?
Finding common ground	It is important to work together with my patient for mutual understanding and co-operation. Finding common ground can be a challenging process of negotiation
Conflicting agendas	If you and your patient do not have a shared agenda this can cause tension. Patients often expect a cure, a specific test or a referral when this is not on my agenda
Show them you believe them	I need to show patients that I believe them
It's a matter of give and take	I sometimes provide things that my patients ask for in order to maintain our relationship, even when I know there is little point. My decisions are not always taken on clinical grounds. At times you need to balance long- and short-term gains
Patient empowerment is easier said than done	It is difficult to navigate between professional and patient expertise. When do I let my patient make the decision (especially when I think they are making a mistake)? Although I should let them be in control, it can be easier to take charge
Feigning diagnostic certainty	My patients cling 'tenaciously' to the biomedical model and sometimes I 'feign diagnostic certainty' so that they continue to trust me. However, I sometimes worry that this is dishonest
Healing supersedes fixing	Healing is a journey that I take in partnership with my patient. Sitting alongside rather than constantly trying to diagnose and fix can take away the sense of failure for both of us

TABLE 8 Forty-two conceptual categories included in conceptual analysis (*continued*)

Conceptual category title	Description of conceptual category ^a
Between biomedical and psychological explanations	Patients do not want to shift from a biomedical explanation to a psychosocial one. The biomedical model is more socially acceptable in our culture. Trying to shift my explanation can make it very difficult for me to maintain a good relationship with my patient
Bridging biomedical and psychosocial	When I shift from biomedical explanation to a psychosocial explanation I use strategies to avoid alienating my patient. This does not resolve the uncertainty but circumvents the problem by using other labels or treatments that can be ambiguous
I am in the best position to know the patient but no one listens to me	Even though, on the front line, I am in a 'the perfect position' to get to know the patient and help manage their pain, I am ignored or undermined by my colleagues who do not listen to what I have to say
Mutual professional respect facilitates care	A mutual and respectful relationship with my colleagues can facilitate the kind of communication that underpins effective pain management
Proximity and continuity facilitate team work	Working in the same place as my colleagues facilitates the collaboration necessary for effective pain management
Breaking down professional boundaries	We should break down professional boundaries and hierarchies and work together as a team. This involves knowing and valuing what each professional can offer, helping out and sharing knowledge
Picking up the pieces	I sometimes have to spend time undoing what another health professional has done or said. I have to pick up the pieces
The siren song of diagnosis	I focus on the biomedical disease not the person. Biomedical disease takes precedence; it is something. However, I know that this model did not fit chronic pain
Pain is embodied, not dualistic	I focus on the person, rather than the part of the body in pain. I focus on my patient's suffering beyond their bodily pain. Pain is multidimensional and my 'gaze' therefore needs to be multifocal
The test results can come back to you like a boomerang	Getting an X-ray might reveal something that is not the cause of the pain and create an additional problem to deal with. A red herring
You need to cover your back	I will get an X-ray done just in case there are any legal repercussions. I want to be certain I have not missed anything
The X-ray will rule out anything serious	I will get an X-ray to rule out serious pathology. There have been examples of missed cases. I want to reassure my patient that there is nothing serious, even though I am certain that there is nothing there
I will let you have an X-ray	This describes the strategic use of X-rays in maintaining patient relations and trust (i.e. I am prepared to bend the rules for you). Some ordered X-rays because the patient asked for one, or as a compromise for a preferred or less accessible service
X-ray will buy me time	This describes X-ray referral as a means of biding time or buying time. It is sometimes quicker just to order an X-ray. It might also save time en route to a different service
Is the pain real?	I sometimes feel sceptical about my patient's pain. What I see and what they tell me does not always fit. I find myself 'second guessing'. However, I am aware of the social doubt about chronic pain and know that it is not wise to 'judge a book by its cover'
The moral dimension of pain management: I hate to say it but . . .	There are always those who complain more than others; who are just seeking attention or who demand things; who are non-compliant or unmotivated. However, we should not judge a book by its cover
^a This column provides a description of each of the 42 conceptual categories written in the first person. These are not quotations from primary studies.	

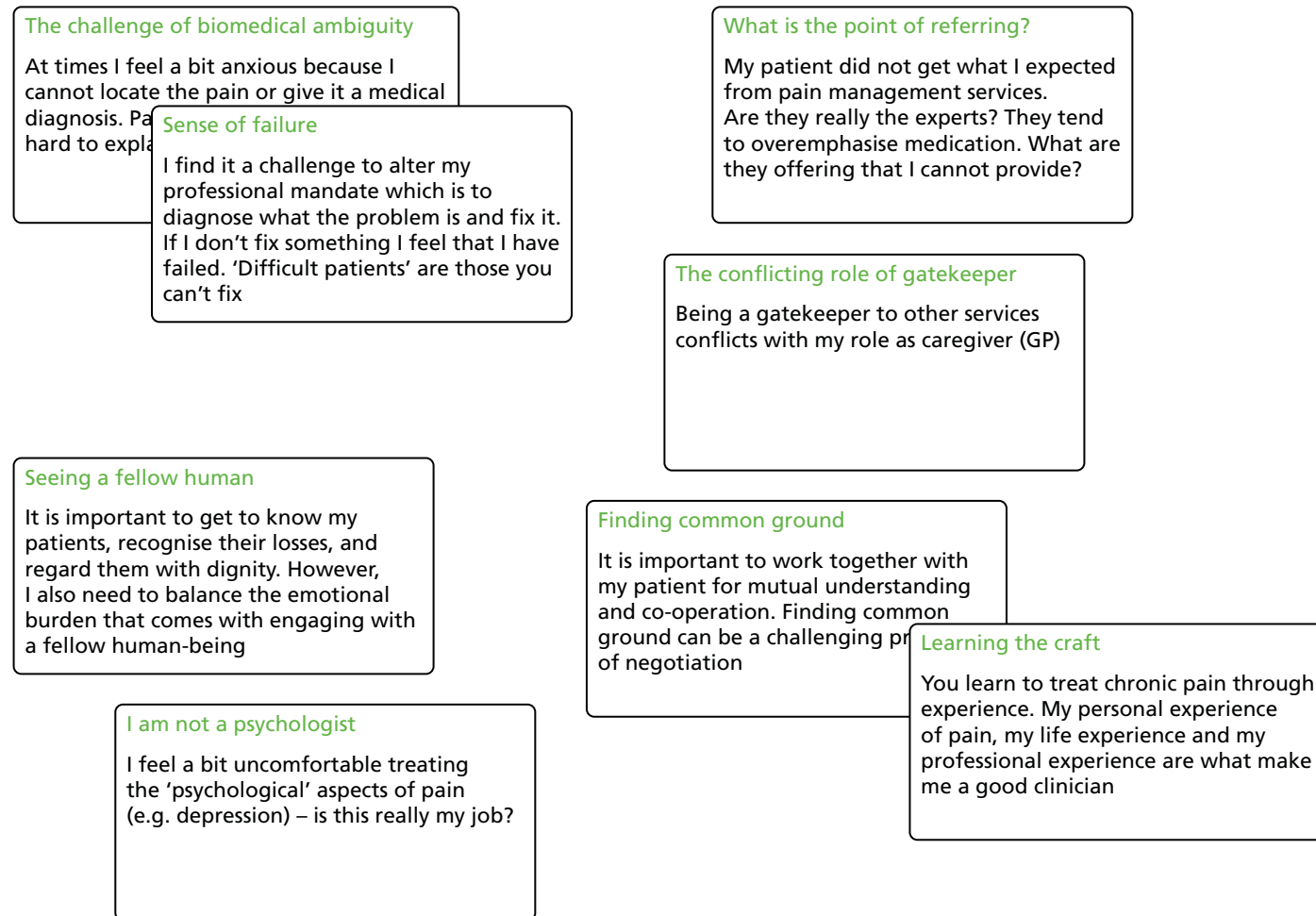


FIGURE 4 Illustration of conceptual analysis with advisory group.

TABLE 9 Conceptual categories underpinning each of the six overarching themes

Final theme	Conceptual category underpinning theme
Sceptical cultural lens and siren song of diagnosis	Is the pain real?
	The moral dimension of pain management: 'I hate to say it but ...'
Navigating juxtaposed models of medicine	'The siren song of diagnosis'
	Between biomedical and psychological explanations
	Pain is embodied, not dualistic
	Healing supersedes fixing
	This endless paperwork takes time
	It takes time to get to know someone
Navigating the patient–clinician borderland	My professional duty
	Finding common ground
	Conflicting agendas
	Show them you believe them
	It's a matter of give and take
	'Patient empowerment is easier said than done'
	Feigning diagnostic certainty
	Bridging biomedical and psychosocial
The challenge of dual advocacy	Picking up the pieces
	I am my patient's advocate
	The conflicting role of gatekeeper
	It is difficult to access specialist services
	What is the point of referring to other services?
	Mutual professional respect facilitates care
	Proximity and continuity facilitate team work
	Breaking down professional boundaries
	I am in the best position to know the patient but no one listens to me
Personal costs	The challenge of biomedical ambiguity
	A sense of failure
	Seeing a fellow human
	Exhausted by the sense of loss
The craft of pain management	Learning the craft of pain management
	We did not learn this in class
	I am not a psychologist
	Guidelines: take them or leave them
	Guidelines: constrain expert knowledge
	Guidelines: prevent individualised care
	Guidelines: to convince others about my decisions
	Guidelines: support psychosocial model
	The test results can come back to you like a boomerang
	You need to cover your back
	The X-ray will rule out anything serious
	I will let you have an X-ray
	X-ray will buy me time

TABLE 10 Studies and number of concepts for each theme organised by topic/professional group

Global appraisal score	First author/year	Theme (number of concepts)						Topic professional group
		Sceptical cultural lens and siren song of diagnosis	Navigating juxtaposed models	Navigating the patient-clinician borderland	Challenge of dual advocacy	Personal cost	The craft of pain management	
Valuable	Allegretti 2010 ¹¹		2	1		2		Primary care physicians/GPs
SAT	Bergman 2013 ¹⁵⁸	2	2		1	2	1	
SAT	Chew-Graham 1999 ¹⁶⁴			1		2		
SAT	Kristiansson 2011 ¹⁹²	1		9	2	5		
Valuable	Lundh 2004 ¹⁹⁵	1	2	1		4	1	
Uncertain	MacNeela 2010 ¹⁹⁶	3	1	2	1		1	
Valuable	Patel 2008 ²⁰⁴		1			1		
Valuable	Patel 2009 ²⁰⁵				2			
SAT	Schulte 2010 ²⁰⁹			1	3			
KP	Wainwright 2006 ²²²		3	6				
Uncertain	Eccleston 1997 ¹⁷²	1	1					Mixed
SAT	Löckenhoff 2013 ¹⁹⁴			1				
SAT	Parsons 2012 ²⁰³	2	1				2	
Valuable	Toye 2015 ²²⁰	1	4	1		4		
Valuable	Daykin 2004 ¹⁷⁰	1	1			2	4	Physiotherapy
Uncertain	Øien 2011 ²⁰¹			3		1		
KP	Slade 2012 ²¹⁴		2	3	1		4	
KP	Afrell 2010 ¹⁵¹		6	1		2		Special physiotherapy
Valuable	Barker 2015 ¹⁵⁴		2	2		3	1	
Valuable	Scott-Dempster 2014 ²¹⁰		2	6		1		

Global appraisal score	First author/year	Theme (number of concepts)						Topic professional group
		Sceptical cultural lens and siren song of diagnosis	Navigating juxtaposed models	Navigating the patient–clinician borderland	Challenge of dual advocacy	Personal cost	The craft of pain management	
SAT	Åsbring 2003 ¹⁵²	3	2	3		2	1	Fibromyalgia
SAT	Briones-Vozmediano 2013 ¹⁶¹		1	2	1	2		
SAT	Hayes 2010 ¹⁸¹	1						
SAT	Hellström 2015 ¹⁸³	1	3	2		3		
SAT	Paulson 1999 ²⁰⁶		1					
Valuable	Baszanger 1992 ¹⁵⁶		5	4				Specialist chronic pain services
SAT	Cartmill 2011 ¹⁶³		1		3			
SAT	Howarth 2012 ¹⁸⁶				3		1	
SAT	O'Connor 2015 ²⁰⁰		2		3			
SAT	Oosterhof 2014 ²⁰²			3			1	
SAT	Sloots 2009 ²¹⁵		1					
SAT	Sloots 2010 ²¹⁶			3				
Valuable	Stinson 2013 ²¹⁹	1	1	2	1	4		
KP	Thunberg 2001 ¹⁵⁰	1	4	3	1			
Valuable	Tveiten 2009 ²²¹			3		1		
Valuable	Zanini 2014 ²²⁵			2		1		
SAT	Côté 2001 ¹⁶⁷	1	1	2	2		1	Work disability
SAT	Coutu 2013 ¹⁶⁸		1	2				
SAT	Hansson 2001 ¹⁷⁹				1			
SAT	Hellman 2015 ¹⁸²				2			
SAT	Wynne-Jones 2014 ²²⁴			1	2	1	1	
continued								

TABLE 10 Studies and number of concepts for each theme organised by topic/professional group (*continued*)

Global appraisal score	First author/year	Theme (number of concepts)						Topic professional group
		Sceptical cultural lens and siren song of diagnosis	Navigating juxtaposed models	Navigating the patient-clinician borderland	Challenge of dual advocacy	Personal cost	The craft of pain management	
SAT	Baldacchino 2010 ¹⁵³						1	Prescription of opioids
SAT	Barry 2010 ¹⁵⁵	2	2	1	4	1	3	
Valuable	Berg 2009 ¹⁵⁷		1	1		1	1	
SAT	Esquibel 2014 ¹⁷⁴	3	2	1				
SAT	Fontana 2008 ¹⁷⁵		2				1	
SAT	Gooberman-Hill 2011 ¹⁷⁷						1	
Valuable	Kilaru 2014 ¹⁹⁰		1					
Valuable	Krebs 2014 ¹⁹¹	1	2					
Valuable	McCrorie 2015 ¹⁹⁸	2	1	1	2	1		
Valuable	Seamark 2013 ²¹¹		1				1	
SAT	Spitz 2011 ²¹⁷	2	1				2	Guidelines
SAT	Starrels 2014 ²¹⁸	1						
SAT	Dahan 2007 ¹⁶⁹	1		3	1	2	2	
SAT	Espeland 2003 ¹⁷³	1		6			1	
SAT	Harting 2009 ¹⁸⁰		1				6	
SAT	Poitras 2011 ²⁰⁷		2	1	2		6	
SAT	Shye 1998 ²¹²			6	1			
KP	Wilson 2014 ²²³						4	Older adults
Valuable	Blomqvist 2003 ¹⁶⁰	3	1			2		
SAT	Cameron 2015 ¹⁶²		1		1			
SAT	Ruiz 2010 ²⁰⁸				1		3	

Global appraisal score	First author/year	Theme (number of concepts)						Topic professional group
		Sceptical cultural lens and siren song of diagnosis	Navigating juxtaposed models	Navigating the patient–clinician borderland	Challenge of dual advocacy	Personal cost	The craft of pain management	
SAT	Clark 2004 ¹⁶⁵	1	1		1	2		Pain in aged care facilities
SAT	Clark 2006 ¹⁶⁶	1			2			
Valuable	Dobbs 2014 ¹⁷¹	1				1	1	
Valuable	Fox 2004 ¹⁷⁶		2		4	2	1	
Uncertain	Gropelli 2013 ¹⁷⁸				1		1	
SAT	Holloway 2009 ¹⁸⁴	1			2	1		
SAT	Holloway 2009 ¹⁸⁵				2	5		
Valuable	Kaasalainen 2007 ¹⁸⁷				1	2		
SAT	Kaasalainen 2010 ¹⁸⁸							
SAT	Kaasalainen 2010 ¹⁸⁹	1	1		2		2	
SAT	Liu 2014 ¹⁹³				3	3		
SAT	McConigley 2008 ¹⁹⁷				1		3	
SAT	Mentes 2004 ¹⁹⁹				2	2		
SAT	Blomberg 2008 ¹⁵⁹		1		4			Nursing
SAT	Siedlecki 2014 ²¹³	2	1	2	4	3	1	
KP, key paper; SAT, satisfactory.								

Assessment of confidence in findings (GRADE-CERQual)

Indicators of confidence in each review finding are shown in *Table 11* [including the number of studies rated as key/valuable or satisfactory (methodological limitations); the number of concepts (adequacy); the number of studies out of 77 (coherence); an assessment of study relevance; and our overall assessment of confidence]. We rated our confidence in the review finding as high when it was supported by more than half of the studies. However, there is currently no agreed way of assessing confidence.

Conceptual themes

We illustrate the six themes with narrative exemplars. The film output 'Struggling to support people to live a valued life with chronic pain' can be watched on YouTube (see *Report Supplementary Material 1*; URL: www.journalslibrary.nihr.ac.uk/programmes/hsdr/1419807/#/documentation).

A sceptical cultural lens and siren song of diagnosis

This theme describes a cultural lens that provides a sceptical view of chronic pain. With this view, clinical work focuses on determining whether pain is 'something' (biomedical) or 'nothing'. Although some acknowledged the dangers of 'judging a book by its cover', HCPs viewed the world through this sceptical lens and at times found themselves making non-clinical judgements about whether a patient's pain was real or imagined. HCPs described how they could experience a dissonance between what they saw and what the patient said:

Sometimes I could have a patient sitting there and saying that they are hurting, 10 out of 10, and they are sitting like you and I.

Bergman 2013¹⁵⁸

Some people say 'This is the worst pain I've had in my whole life' without any real sort of physical signs of pain so it's really tough; we have a complex job in assessing that.

Kaasalainen 2010¹⁸⁹

The patients tell me with a smile on their lips that they are suffering immensely from all kinds of bodily disorders. How on earth can they look so terribly healthy?

Hellström 2015¹⁸³

However, HCPs recognised the dangers of their scepticism and acknowledged a need to not make hasty judgements. Although they knew that patients did not always look like they were in pain, HCPs remained 'on guard' against being exploited by fraudulent claims of pain:

You'd have to be on guard this man isn't laying it on.

MacNeela 2010¹⁹⁶

It is not clear to me why he is the way he is . . . this catastrophic pain and what he is telling himself about it . . . but there is always a little bit . . . of concern; am I being manipulated, is this really real?

Esquibel 2014¹⁷⁴

Such people . . . ones whose wishes you cannot fathom – provoke anger and frustration because at some point, you don't always know how to verify their complaints. You feel somewhat exploited. It is a very unpleasant feeling.

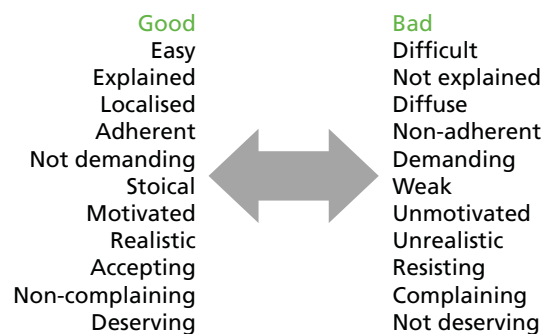
Dahan 2007¹⁶⁹

Health-care professionals thus engaged in moral 'boundary work' in order to second-guess patients' claims and determine credibility. The process of boundary work hinged on a multiplicity of dualities superposed on a polarity of 'good' and 'bad' (*Figure 5*).

TABLE 11 Confidence in review findings: GRADE-CERQual assessment

Review finding	Methodological limitations: satisfactory (key)	Relevance	Adequacy (number of concepts)	Coherence ^a (number of studies out of 77)	Assessment of confidence
Sceptical cultural lens and siren song of diagnosis	29 (0)	22 direct, 4 indirect, 2 partial, 1 uncertain	43	29 ^{150,152,155,158,160,165–167,169–174,181,183,184,189,191,192,195,196,198,203,213,217–220}	Moderate
Navigating juxtaposed models of medicine	42 (2)	37 direct, 4 indirect, 2 partial, 1 uncertain	77	44 ^{11,150–152,154–163,165,167,168,170,172,174–176,180,183,189–191,195,196,198,200,203,204,206,207,210,211,213–215,217,219,220,222}	High
Navigating the patient–clinician borderland	34 (2)	29 direct, 3 indirect, 3 partial, 1 uncertain	92	36 ^{11,150–152,154–157,161,164,167–169,173,174,183,192,194–196,198,201,202,207,209,210,212–214,216,219–222,224,225}	Moderate
The craft of pain management	29 (2)	27 direct, 2 indirect, 1 partial, 1 uncertain	60	31 ^{152–155,157,158,167,169–171,173,175–178,180,186,189,195–197,202,203,207,208,211,213,214,217,223,224}	Moderate
Challenge of dual advocacy	35 (1)	26 direct, 4 indirect, 5 partial, 1 uncertain	70	36 ^{150,155,158,159,161–163,165–167,169,176,178,179,182,184–187,189,192,193,196–200,205,207–209,212–214,219,224}	Moderate
Personal cost	32 (1)	28 direct, 4 indirect, 1 partial, 0 uncertain	71	33 ^{11,151,152,154,155,157,158,160,161,164,165,169–171,176,183–185,187,192,193,195,198,199,201,204,210,213,219–221,224,225}	Moderate

^a Fifteen out of 371 concepts did not fit conceptual categories.

**FIGURE 5** Dualities of moral boundary work.

In contrast, some HCPs recognised that moral boundary work was flawed and advocated trust as the basis of a therapeutic relationship:

Sometimes we say 'oh she came in with back pain but I don't think she's really in pain' . . . but really even if somebody is in pain and distress, [it] doesn't always have to be in how they present themselves . . . that doesn't mean she is not in pain.

Toye 2015²²⁰

I hate to say it . . . but I used to be one of the people that used to say, 'Oh, well, they are probably just wanting attention'. But I've changed in that matter. People are in pain, and it's not just to get attention.

Clark 2006¹⁶⁶

Pain is so subjective and so that's where the difficulty lies . . . I find it hard to say how someone's pain can be judged by someone else . . . You have to show a patient you're empathetic to him. There is a pain. Pain is real.

Bergman 2013¹⁵⁸

Navigating juxtaposed models of medicine

This described HCPs' challenge of navigating juxtaposed models of medicine: the biomedical and the biopsychosocial. HCPs described a culturally entrenched pull towards the biomedical 'siren song of diagnosis'.²¹⁴ Clinical work, therefore, hinged on proving (or disproving) the presence (or absence) of something 'real':

Being able to track something gives me more comfort than going by what you're telling me . . . because I like to see proof . . . You [want to] . . . be convinced that you're treating something and that what you're treating is real.

Berg 2009¹⁵⁷

I will listen to their story, I will examine them and I always say you have got to exclude the physical first that is your job . . . I think as doctors we have an obligation to exclude the physical first and not jump into [psychosocial explanations] because it reduces the patient to being an un-necessary complainer and I don't believe that they really are.

Wainwright 2006²²²

Unexplained symptoms such as chronic pain were felt to obscure 'real' health problems such as diabetes or heart conditions:

They don't seem to worry about issues that might be real . . . his cholesterol is high, he's not worried . . . There are some other issues that he needs to attend to, and he's not worried. His father died when he was 52. He's not worried. He was 53.

Bergman 2013¹⁵⁸

Even those HCPs who advocated a biopsychosocial model could make an abrupt shift towards psychosocial explanations only after they had excluded something biomedical. After this shift, clinical work moved away from diagnosis towards persuading patients that psychosocial factors influenced pain. This abrupt shift, indicating a dualistic biopsychosocial model, could threaten the therapeutic relationship:

The terminology . . . psychiatric and psychological . . . have a stigma attached to them that is not intended . . . we accept that patients with long term pain will have a psychological component to it but actually labelling it as that.

Toye 2015²²⁰

Health-care professionals recognised the potential tension and, therefore, would default to biomedical explanations or use 'bridging' strategies to smooth, or even conceal, the shift from biomedical to psychosocial explanations. These explanations still tended to focus on the physicality of the body:

If you present [the pain explanation] as a completely airy fairy psychological . . . then they are going to go away dissatisfied . . . you have got to lead them in gently . . . there is an element of mind and body that contribute.

Wainwright 2006²²²

If you start from the body and if you ask a little carefully how things work when you are physically like that, then it is not threatening, and you can approach things, like, through the body.

Afrell 2010¹⁵¹

Some HCPs felt that offering a diagnosis helped patients to move forward, or gave a sense of relief. Some might even 'feign diagnostic certainty'²²² to achieve this goal:

The fact that they tell you that you have a problem that's not just to do with your nerves and that there's something wrong physically . . . Just that gives you a certain sense of relief.

Briones-Vozmediano 2013¹⁶¹

Once I give [a diagnosis] . . . I am ready to say . . . let's stop doing tests. Let's stop sending you to lots of different doctors looking for a cure . . . let's try and make you better . . . [they] have more tests than is good for them.

Wainwright 2006²²²

Well, if she seems to have use for a diagnosis to achieve her goal, I'll gladly help her.

Hellström 2015¹⁸³

Others voiced ethical concerns about the deception of feigning diagnostic certainty:

I am very happy for a person to treat the whole person and we do it all the time . . . But I think giving it a label that actually has no justification I think is misleading to the patient and I actually feel quite strongly about that.

Wainwright 2006²²²

Not all HCPs utilised a dualistic biopsychosocial model. Some did not make an abrupt shift towards psychosocial explanations but, rather, utilised an embodied biopsychosocial approach with 'no breaking point where the physical becomes psychological'.¹⁵⁶ In these cases, there was a sense that pain is multidimensional and that the 'physician gaze'²²⁶ is multifocal. Clinical work involved understanding a person's suffering from the outset of health care, alongside attempts to define pain in biomedical diagnostic terms. These HCPs described an embodied approach to health care underpinned by the aim of understanding that a person is suffering from 'something':

If there isn't a physiological problem, it doesn't mean that there isn't an illness, and if the patient is suffering then we should look at the problem and how we can help.

Wainwright 2006²²²

While we talked . . . many losses came up and I began myself to think about what all this was about in fact, what is this pain? Where it came out that there was a lot of disappointment, where there was divorce and . . . yes, it can't be purely physiological.

Afrell 2010¹⁵¹

Once a person's life has fallen apart it's not so much about the pain and the injury anymore. It's about all these other things in their life and it's all these other things that need to be addressed in order to get them better and get them back on track.

Cartmill 2011¹⁶³

Those who utilised an embodied psychosocial model recognised that sitting alongside and supporting patients, rather than trying to 'fix' them, could be rewarding for both the patient and their HCP. There was also a sense that sitting alongside a person on a healing journey, rather than holding on to the professional desire to 'fix', could take away the sense of professional failure and be rewarding for both the patient and the professional:

[It is] a journey rather than 'this is my one chance . . . and I have to get it all done in one go' . . . It's about moving away from that place of stuckness and creating a little bit of momentum . . . you know when you're pushing a car.

Toye 2015²²⁰

[The] traditional model . . . doesn't allow people to express how pain has affected their whole life, it is very homed in to the particular area of the body and trying to fix it . . . [I] find it more satisfying to work in a way that acknowledges and discusses the impact.

Scott-Dempster 2014²¹⁰

Some described how time restrictions and demands in the health-care system could encourage HCPs to focus on the physical body:

The biggest problem in the whole thing is lack of time. Typically these are complex people with multiple problems, and you really could spend the whole appointment, more than one whole appointment, just talking about this.

Krebs 2014¹⁹¹

We are limited by the amount of time with the patient. I know this sounds bad, but [talking about pain] opens a can of worms.

Siedlecki 2014²¹³

I think as a clinician [you] focus straightaway on . . . a biological type approach to it. I think some of the psychological feelings get more brushed over perhaps . . . very often there is not the space in the consultation.

Toye 2015²²⁰

Navigating the patient–clinician borderland

This theme describes the complexity of navigating the borderland between patient and HCP. First, there is a need for give and take in order to maintain a therapeutic relationship. Second, there is a need to negotiate effective control of the therapeutic decisions. Integral to a negotiated relationship is the need to find common ground. Tension could arise when the patient and the HCP did not share an agenda, in particular when the patient's expectations of diagnosis, treatment and cure were not met. The challenge for HCPs became to find this common ground or lose the patient's trust:

People feel let down by their doctors . . . The degree of satisfaction is very low . . . basically because we don't solve their problem . . . They go from one to the other, they find a doctor who gives them hope and they go to him.

Briones-Vozmediano 2013¹⁶¹

We kept having a difference of opinion: we think that your back isn't damaged; we think the pain is caused by a false danger message from your brain while there is no tissue damage in your body. He said: I can't understand that . . .

Oosterhof 2014²⁰²

To effectively maintain an effective therapeutic relationship, HCPs sometimes made clinical choices that they might regard to be of doubtful medical utility because this was what the patient wanted (e.g. referring for an X-ray, prescribing painkillers or referring to secondary health care). Maintaining a therapeutic relationship was described as a matter of give and take and attempts to balance long- and short-term gains were therefore described as integral to clinical work. Concessions were sometimes necessary:

Sometimes patients refuse to believe that their condition cannot be treated . . . and insistently ask for a series of medical investigations that you, as a doctor, would not perform. In such cases, a medical investigation can work as a therapy because it . . . shows that you listened to them.

Zanini 2014²²⁵

There definitely have been times when I've issued a [sick] note just purely because it's become so antagonistic in a consultation that's what I've done.

Wynne-Jones 2014²²⁴

Health-care professionals described the challenge of negotiating control of therapeutic decision-making and of deciphering the borderline between professional expertise and patient empowerment. HCPs were on guard against being 'bullied' into clinical decisions, but at the same time they wanted the patient to be involved in clinical decisions. HCPs described times that they found it difficult to stand back and let patients make a decision that they considered to be the wrong one:

I recognise that . . . we are trying to promote learning by giving choice and allowing people to get it wrong . . . get that, although it is still hard . . . not to give advice when I see . . . that the advice can be really helpful.

Barker 2015¹⁵⁴

Trying to allow myself to listen objectively and to . . . sit with the fact that actually [the patient] might want to do something which is wholly unsensible, but allowing that to happen if that truly is what they want.

Scott-Dempster 2014²¹⁰

When opinions conflicted, the HCP 'short-circuit' tended to take control.²²¹ This navigational strategy utilised a model of un-negotiated HCP ownership over clinical decision-making.²¹⁴ Here, professional knowledge is paramount and part of clinical work is to persuade patients to follow their recommendation. Patients were allowed to participate in decisions, but only up to a point. Clinical work was to tell the patient what to do and hope that they did what you wanted:

How do you get them to do what you want?

Slade 2012²¹⁴

[Some say] 'I know so much more about my illness than you do and I'm going to tell you what to do.' . . . You want to have a team effort . . . but you also don't want to be bullied . . . they can be the toughest patients to deal with.

MacNeela 2010¹⁹⁶

However, there was a sense that trying to enforce control or 'adherence' was not effective. An alternative strategy involved enquiry and negotiation, rather than persuasion or enforcement and, here, clinical work incorporated 'wondering together with the patient'.²²¹

If you share your knowledge, not by telling that you are right, but really share what you know about the drugs and the effect . . . then you offer the patient an opportunity to think and decide by himself.

Tveiten 2009²²⁴

There's something magical in this. If I've understood what the patient wants from me, and he understands what I'm going to do with him, then I have a good chance of succeeding.

Côté 2001¹⁶⁷

Patients have to embrace our suggestion because they are convinced that it is the right one and not because we want them to choose a particular option. If you propose something that is inconsistent with their experience or knowledge, there is a risk that they will not listen to you.

Zanini 2014²²⁵

This theme was not supported by studies that explored the experience of HCPs in care facilities for older adults and this might indicate a difference in experience in these situations.

The challenge of dual advocacy

This theme describes the HCP as simultaneously an advocate of the patient and the health-care system. Although representing the patients' interests, they are also a cog in a larger health-care system. At times it could feel like cogs in the machine were working against the patient and each other. HCPs could find themselves in a position of mediation or gatekeeping within the health and social care system. At times, this might involve undoing the work of other HCPs, and some HCPs felt like a linchpin keeping the 'wheels' of the system in place:

I mean it's a dual role for us obviously we're responsible for someone's physical health and this is the second role that we have as a sort of gatekeeper to, you know getting incapacity benefits and the two sometimes don't sit very comfortably.

Wynne-Jones 2014²²⁴

It all ends up on our doorstep. It is not only we who face the system – we are mediators of sorts between the patient and the system. Not only must we work with the patient against the system, but with the system as well.

Dahan 2007¹⁶⁹

I think it's good to take ownership . . . as soon as someone gets sort of uncomfortable they will shift to a different prescriber . . . And I honestly think it's like a ship without a rudder and it's just going round and round in circles.

McCrorie 2015¹⁹⁸

At times it felt difficult to access effective specialist services:

There is a really big access issue with the pain clinics right now . . . while I can refer them, their likelihood of getting an appointment, even with strong advocacy from me, is very low.

Barry 2010¹⁵⁵

Many cases are being referred to rheumatology and rehabilitation, to specialist doctors in rehabilitation and some are sent to psychiatry . . . but not all patients are given this opportunity, it's not open to everyone because there just aren't the resources to offer these services to everyone.

Briones-Vozmediano 2013¹⁶¹

There was a sense of mismatch between what primary care practitioners expected from secondary care and what they received:

Every time I send somebody to chronic pain [clinic] they come out with more medication, or injections.

McCrorie 2015¹⁹⁸

Often I find that they are not accomplishing any more than I was and [patients] are often sent back to me with them [pain specialists] essentially saying, 'we did our best'. It's very frustrating, because if they were easy patients they wouldn't have been seeing them.

Barry 2010¹⁵⁵

Others described a working health-care system in which the cogs work smoothly together. This system incorporated the benefits of reciprocity, mutuality and collaboration between HCPs and the benefits of being able to break down or cross professional boundaries and hierarchies. Being confident in other professionals' capabilities, reciprocal respect, team intelligence and shared knowledge could underpin an

effective chronic pain service. Geographical proximity and continuity of staff were described as facilitating teamwork, whereas hierarchical relations could impede effective communication and pain management:

We get a lot of mileage about slapping each other on the back a little bit. And increasing other members of the team's confidence by respecting other members of the team, their profile is improved, I think.

Howarth 2012¹⁸⁶

There's no sort of hierarchy. There's the team, then there's the clinical practice lead and then there's management. But amongst the team there's no real hierarchy.

Cartmill 2011¹⁶³

If the team sort of echoes the same message and provides richness in terms of their different perspective on it but it all sort of amounts to the same message, then I think there's less confusion for the poor clients.

Cartmill 2011¹⁶³

Contrary to this, in residential care facilities, unqualified front-line staff described how they could feel disempowered by qualified professionals:

We're at the bottom of the ladder, but we do the most important job . . . I mean we're the ones in the wards and spend the bulk of the time with the residents.

Holloway 2009¹⁸⁵

They act like the only thing we're good for is to go clean butts . . . they really need to realise that we spent all this time with these residents . . . and we do know a little bit about what's going on . . . they need to give us a little bit more respect.

Clark 2006¹⁶⁶

I've charted many times . . . the patient screaming, yelling, pulling hair, blah, blah, blah, and right underneath my charting the doctor writes, 'Stable'.

Fox 2004¹⁷⁶

Personal costs

This theme described the emotional costs of providing health care to people with chronic non-malignant pain. On the one hand, the biomedical model could create a sense of professional failure for not being able to fix the problem. On the other hand, an embodied approach to pain management could incur a personal cost. As chronic pain did not comfortably fit the biomedical model, some HCPs felt challenged because they could not locate or define pain biomedically:

I'm a scientist, at least I like to have objective things, numbers, data, pictures, lab results. I actually don't like the challenge of trying to read a person's mind.

Berg 2009¹⁵⁷

Unpleasant emotions, they explained, can cause as much suffering as physical pain. What, then, is pain? And can it be quantified or even identified as a pure sensation?

Clark 2004¹⁶⁵

The problem is that there is no objective test to diagnose these patients. I don't have a test that enables me to say: 'this patient has fibromyalgia or doesn't have fibromyalgia'.

Briones-Vozmediano 2013¹⁶¹

Being unable to diagnose a problem and offer a cure instilled a strong feeling of professional failure. HCPs found it professionally challenging to be unable to 'fix' people despite a strong desire to fix things.

HCPs became frustrated and demoralised, and at times they could feel 'on a hiding to nothing'; 'how did we fail them?':²¹³

It's awful, and I think it's demoralizing when you leave people in pain. That's just so disrespectful. I mean you're supposed to be a doctor, you're supposed to relieve pain and suffering, and you ignore the pain.

Barry 2010¹⁵⁵

You become a doctor not to tell people I can't do anything, I can't find anything, you have this perception of yourself as well that you're going to sort it out and if you can't sort it out, it's frustrating. What's the point of you being there?

Patel 2008²⁰⁴

No matter what I do, I can use prescription pad and pen and do sleight-of-hand feats and stand on my knees and perform conjuring tricks! Nothing helps!

Lundh 2004¹⁹⁵

An embodied approach to pain management involved recognising the overwhelming loss of a fellow human being and this could come with a personal cost:

We forget how much chronic pain affects the patient. They lose their jobs, they have emotional stress and depression and the depression itself is a big loss of productivity to the patient but also to the entire family and to the community.

Siedlecki 2014²¹³

What they need is somebody to sit and talk with them and rub their back or they need company and they need understanding and compassion and you can't give them that in a pill.

Fox 2004¹⁷⁶

Health-care professionals recognised a need to balance the emotional burden of familiarity:

Trying to listen to the person . . . sort of empathise . . . [but] almost protected professionally . . . trying to see where that person was coming from but not letting it become too personal . . . I've used the phrase detached empathy.

Toye 2015²²⁰

The craft of pain management

The final theme described clinical work as an experience-based competence or 'craft'.¹⁷⁰ This craft was gained from experience and patient mileage rather than through didactic education or research. At times HCPs felt underskilled in chronic pain management, particularly in relation to psychological therapies:

The problem is, we don't know how to treat pain. And so everybody is telling me I'm not treating pain well, but nobody is helping me figure out how to treat the pain.

Spitz 2011²¹⁷

I am not a psychologist . . . Someone bringing out a lot about their past . . . we don't want to say the wrong thing and it be to someone's detriment . . . you don't want to open this can of worms.

Barker 2015¹⁵⁴

It's fine saying [to a patient] yes well you know that is part of the pain . . . you feel depressed with it . . . I don't really feel I'm at all competent in knowing what to say to try and help them round that.

Parsons 2012²⁰³

Personal experience and maturity, patient mileage and learning from more-skilled professionals (apprenticeship) were described as integral to craft knowledge:

One becomes more stable as a person [with age], and does not really have the same demands and does not believe that one can do everything, that one is able to solve everything . . . Young doctors can have in them, that they believe that they will solve everything.

Åsbring 2003¹⁵²

New grads can't learn all of this, they need a certain number of years, you can't teach them all of this, there's so much they've got to learn.

Slade 2012²¹⁴

If you have a patient who's not responding the way that you expect, it's nice to have someone there who can have a look and see . . . you can see and hear what everybody else is doing and that is how you learn . . . it's like osmotic learning.

Slade 2012²¹⁴

Pragmatic use of guidelines

There was a sense that evidence-based guidelines could challenge or constrain craft knowledge. Although some HCPs felt that evidence guidelines supported a holistic approach,^{180,207} there was a stronger feeling that guidelines did not facilitate individualised care:

Treatment has to be tailored to patients' needs and prescriptive guidelines promoting 'one size fits all' is not acceptable.

Wilson 2014²²³

If you work according to the guidelines, you are constrained in your performance . . . what would be left of your independence, your own competence, your own practical experience . . . Am I to conclude then that my training was useless?

Harting 2009¹⁸⁰

Most pain specialists spend most of their time treating people with low back pain that's what we do. And a guideline comes out that says, you're not needed. Full stop. It can be managed without any reference to you whatsoever . . . no need for doctors and nurses.

Wilson 2014²²³

Health-care professionals showed limited attention to guidelines in clinical decision-making. Clinical work was about the craft of learning from doing things:

My experience is that therapists say they adhere to the guidelines, although they still all work in different ways.

Harting 2009¹⁸⁰

Such a huge heap, such a bundle of paper, such a bundle of characters . . . we have been educated to do things. So if you give this group a pile of papers, who will read them? I think nobody will.

Harting 2009¹⁸⁰

Health-care professionals framed guidelines within the remit of their own professional knowledge and used them pragmatically and flexibly:

But of course, I'm free to take or leave these things, to look at whether they suit my own ideas of how to approach my patients.

Harting 2009¹⁸⁰

Of course, it is not necessary to follow the guidelines exactly; it is more like: this is roughly the approach, regardless of the background you have.

Harting 2009¹⁸⁰

For example, some used the evidence guidelines as a tool to convince patients or colleagues that their professional decision was the right one:

In the case of disagreement . . . about the treatment policy, you can always turn to the guidelines, and you can argue while showing them these national guidelines.

Harting 2009¹⁸⁰

Health-care professionals described the decision to refer a patient for clinical testing as a craft. This highlights the multiplicities of clinical decision-making whereby HCPs face the challenge of balancing varied competing interests in order to achieve an optimum outcome (Figure 6).

First, a test or investigation might be used to confirm or to rule out serious pathology. This might be to reassure patients or HCPs, or alternatively to convince a patient or HCP that there was no pathology:

'Wear and tear' is, in a way, quite nice to have. Most are satisfied with that . . . nothing dangerous, and nothing that needs surgery. It's a short version of an explanation.

Espeland 2003¹⁷³

At times, there might be a need to rule out pathology as a defence against complaints of malpractice.¹⁷³ However, there was a sense of ambivalence regarding the usefulness of tests in clinical decision-making:

What are we afraid of? After all, it occurs to every doctor sitting here that he may just miss something. That is how we were taught, we were told watch out, you may miss something. How much did we miss? Almost nothing.

Dahan 2007¹⁶⁹

X-rays could also be used strategically to support patients' credibility and to maintain trust. Referring a for an investigation was felt to be a strong statement that patient *I hear you, believe you and I am even*

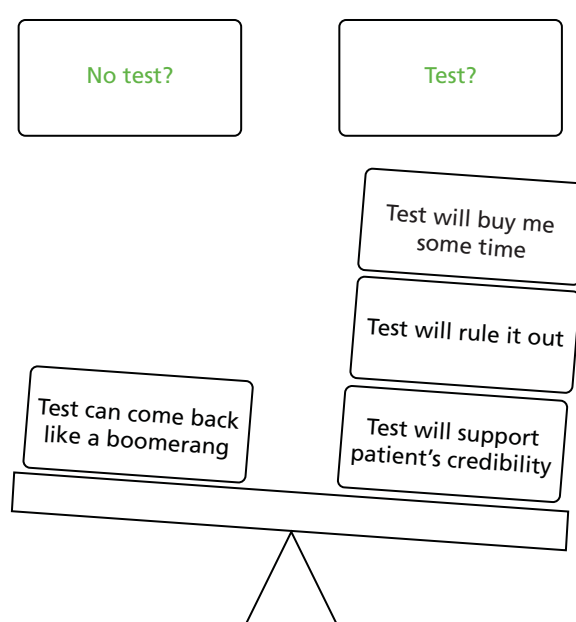


FIGURE 6 Multiplicity of clinical decision-making: do I refer for a test?

prepared to bend the rules for you. Some ordered X-rays because the patient asked for one, or as a compromise for a preferred or less accessible service:

[An X-ray referral] is interpreted as a definite signal that the physician thinks it is something physical. It means . . . [the patient] can come home and say, 'I had an X-ray', and then everybody will realise I have pain in my back.

Espeland 2003¹⁷³

Investigations could also be used as a means of biding time or buying time. It was sometimes quicker just to order an X-ray. It might also save time en route to a different service:

I buy time by ordering an imaging test, even though I know it will not be helpful . . . It buys time . . . It's a kind of therapy. It reassures the patient that they're being cared for.

Shye 1998²¹²

Sometimes I found myself referring a person for an X-ray in order to clear the waiting room and allow myself 2 minutes of breathing time . . . the patient keeps quiet while I write out his referral. Sometimes you find yourself doing this and it goes against any reasoning or logic.

Dahan 2007¹⁶⁹

Some erred on the side of caution in ordering investigations and considered the potential repercussions of securing a false positive:

He's got a scan of his disc, it's there [a disc bulge], but I think he's had it for years . . . but he's now fixated on a disc.

Slade 2012²¹⁴

It come back at me like a boomerang: 'now I'm worn out, I can't work any more, I'll go over to social security benefit'.

Espeland 2003¹⁷³

A word of caution given was to think very carefully about the person for whom the test was being done:

[Be] very self-aware when you're thinking about doing tests . . . sometimes in chronic pain doctors are doing the tests for themselves not for the patient . . . that uncomfortableness with not being able to fix or do something . . .

Toye 2015²²⁰

Conceptual model

The final phase of meta-ethnographic analysis is to develop a conceptual model that is abstracted from, but more than, the sum of its themes. The reviewers developed a model that helps us to understand the experience of providing health care to people with chronic non-malignant pain (Figure 7). The model is underpinned by a series of tensions: (1) between a dualistic biomedical model and an embodied psychosocial model; (2) between professional distance and proximity; (3) between professional expertise and patient empowerment; (4) between a need to make concessions in order to maintain relationships and known biomedical utility; and (5) between patient advocacy and health-care system advocacy.

We conceptualised these tensions, on a mixing console, as underpinning the craft of chronic non-malignant pain management. The poles are neither inherently good nor bad; just as bass and treble are neither inherently good nor bad. It is the correct mix within a context that contributes to the quality of music. Our console also incorporates the pitch or level of loss, both professional and personal, that can contribute to the harmony or dissonance of a therapeutic encounter.



FIGURE 7 Conceptual model: complexity of providing health care to people with chronic non-malignant pain.

Opioid prescription

The reviewers also identified 76 concepts in 17^{153,155,157,161,174,175,177,187,189–191,198,208,211,213,217,218} of the 77 studies that uniquely explored the experience of prescribing opioids to patients with chronic non-malignant pain. The reviewers discussed and organised the 76 concepts (see *Appendix 3*) into 19 conceptual categories (*Table 12*), and then into six themes that underpin HCPs' experience of prescribing opioids to patients with chronic non-malignant pain:

1. should I, shouldn't I?
2. pain is pain
3. walking a fine line
4. social guardianship
5. moral boundary work
6. regulations and guidelines.

A core concept overarching all six themes was a sense of ambiguity surrounding opioid prescribing. We illustrate the six themes with narrative exemplars. Indicators of confidence in our review findings as recommended in the GRADE-CERQual framework³⁷ are given in *Table 13*.

Should I, shouldn't I?

The theme 'should I, shouldn't I?'^{155,157,161,174,175,177,191,198,217} described uncertainty about when to prescribe opioids, and a feeling of ambiguity about the effects of medication:

Depending on who I run into, I may get into all kinds of problems . . . 'You're just being unfair because he's a drug addict . . .'. But if I run into somebody else, they might say 'No . . . that was a good clinical decision'.

*Berg 2009*¹⁵⁷

TABLE 12 Conceptual categories: the experience of prescribing opioids to patients with chronic non-malignant pain

Conceptual category title	Description of conceptual category
A battleground	This describes how the clinical arena for prescribing opioids can become a battleground in which mistrust pervades and the HCP sometimes has to make some concessions to move forward
It's quite a taboo	This describes the stigma of opioids, a culture hostile to long-term opioid use and the taboo of prescribing. HCPs compared their own prescribing practice with that of their colleagues and were concerned over being judged by their peers. Some felt that they had a personal responsibility to protect society from the consequences of drug misuse. There is sense of policing drug use
Concerns over misuse	This describes concerns over misuse of opioid prescriptions
I don't want to feed a habit	This describes the concern about causing addiction or feeding a habit if there was already a history of abuse
Only as a last resort	This describes opioid treatment as a last resort. There needs to be a pretty good reason to prescribe opioids
It's not gonna be my little old lady	This describes the moral boundary work to determine which patients are likely to misuse prescriptions. You have to go with your gut. This boundary work is complex and incorporates non-clinical judgements. However, some sensed the dangers of judging a book by its cover
No diagnosis is a trigger for suspicion	This describes an unwillingness to prescribe opioids to those who have chronic conditions with no biomedical cause, or in whom symptoms are vague. Suspicion arose when observed symptoms did not match the patients report (dissonance)
It's my name on the bottle	This describes concerns about possible legal or regulatory sanctions as a consequence of prescribing opioids as treatment for chronic pain
Addiction not a barrier	This describes a view that drug addiction should not be a barrier to opioid prescription for pain. You can have pain and also addiction and you need to balance the benefits of adequate pain control
Pain is pain (non-malignant or malignant)	This describes how in theory pain is pain, whether malignant or not, and that this should not have an impact on the decision to prescribe. However, in practice it is different. The decision is complicated by the length of time that opioids would be prescribed for non-malignant pain and the fear of causing addiction. There is a sense that experience working in palliative care facilitates prescribing for non-malignant pain
Walking a fine line between gains and losses	This describes the need to carefully balance the benefits and adverse effects of opioids. An emphasis on adverse effects might lead to unnecessary suffering, or to a patient seeking out more harmful methods of pain control. Some HCPs erred on side of benefits and others on the side of harm. There was a sense that patients also have to walk this fine line and make difficult decision
Balancing adverse effects in older adults	This describes concerns over prescribing opioids to older adults because of the potential severity and impact of adverse effects (e.g. polypharmacy, cognitive function and falls). In principle, age should not make a difference, but in practice it does. Sense that you needed specialised knowledge to prescribe in this area
I learnt the hard way	This describes how a HCP had prescribed opioids in the past and got their fingers burnt. At times there was a feeling of being 'deceived' by patients. However, there was also an understanding that part of clinical work was to learn from your mistakes
Should I, Shouldn't I?	This describes a sense of uncertainty about when to prescribe opioids and a feeling of ambiguity about the effects of medication. At times HCPs referred to other HCPs or prescribed medication in order to buy some time. This uncertainty was compounded by not having the time to get to know the patient. A 'let's just wait and see what happens' perspective
Lack of expertise in addiction	This describes a perceived lack of expertise in chronic pain and addiction
Prescribing guidelines: positive	This describes a positive attitude to guidelines that can be used to justify clinical decisions and help to deal with 'challenging' patients. Some also felt that guidelines could help to prevent potential social harm from abuse or misuse

continued

TABLE 12 Conceptual categories: the experience of prescribing opioids to patients with chronic non-malignant pain (continued)

Conceptual category title	Description of conceptual category
Prescribing guidelines: negative	This describes a negative view of prescribing guidelines (the legislature seen as practising medicine without a licence). Guidelines can be used as a reason not to prescribe to those who need it and can interfere with professional autonomy. Some felt that guidelines would only be used pragmatically to support usual care
Opioid agreements: negative view	This describes a negative view of opioid prescribing agreements and drug screening as striking a blow at the heart of the patient–clinician relationship by creating mistrust and hostility. Also a feeling that they are ineffective at stopping misuse of opioids
Opioid agreements: positive view	This describes a more positive view of opioid prescribing agreements that struck a blow at drug misuse. They were useful in establishing boundaries and opening up honest discussion

TABLE 13 Confidence in review findings (opioids): GRADE-CERQual assessment

Review finding	Methodological limitations (satisfactory studies)	Relevance (partial or direct)	Adequacy (number of concepts)	Coherence (number of studies out of 17)	Assessment of confidence
Should I, shouldn't I?	All	9 direct	19	9 ^{155,157,161,174,175,177,191,198,217}	High confidence
Pain is pain	All	5 direct, 1 partial	8	6 ^{153,177,187,189,211,217}	Moderate confidence
Walking a fine line	All	9 direct, 2 partial	20	11 ^{153,157,162,177,187,188,190,194,208,211,217}	High confidence
Social guardianship	All	10 direct, 1 partial	17	11 ^{153,155,157,174,175,177,190,191,208,211,217}	High confidence
Moral boundary work	All	12 direct, 2 partial	27	14 ^{153,155,157,174,175,177,190,191,198,208,211,213,217,218}	High confidence
Regulations and guidelines	All	8 direct	18	8 ^{155,157,175,177,190,191,217,218}	Moderate confidence

The aetiology of the disease is not really known and you have few means of knowing what you're doing. You're treating the pain and you don't know why there is no response . . . No matter what you give them, the pain doesn't go away.

Briones-Vozmediano 2013¹⁶¹

Some felt that clinical education did not prepare them to make these decisions:

We took an advanced pharm[acology] class, and we discussed it in one lecture, but that was it. Isn't that ridiculous considering how many people we see in pain?

Fontana 2008¹⁷⁵

Nobody here knows how to treat pain in anybody who has a history [of addiction] and already on something like methadone. Nobody knows how to treat them . . . Most of us in primary care end up [doing it] by default. But that's not good.

Barry 2010¹⁵⁵

Uncertainty was compounded by the sense that specialist referrals were either restricted or unproductive:

Often I find that they are not accomplishing any more than I was and [patients] are often sent back to me with them [pain specialists] essentially saying, 'we did our best.' It's very frustrating, because if they were easy patients they wouldn't have been seeing them.

Barry 2010¹⁵⁵

Pain is pain

The theme 'pain is pain'^{153,177,187,189,211,217} was underpinned by the concept that if a person is in pain then the primary aim of the HCP should be to try to relieve their pain. If a person is in pain, even drug addiction should not be a barrier to opioid prescription:

At the end of the day, if someone's got chronic pain it doesn't matter if they're addicted to painkillers if it sorts out their quality of life.

Gooberman-Hill 2011¹⁷⁷

I had a guy last week who'd been stabbed . . . and he had to discharge himself because they wouldn't give him any pain control . . . he wasn't even getting his prescribed dose of methadone . . . there's a protocol . . . they choose not to know about it and it's just pure stigma.

Baldacchino 2010¹⁵³

However, HCPs felt that the decision to prescribe opioids was complex and that, although in theory pain is pain, in practice it is different. HCPs described differences in practice that would make them less likely to prescribe opioids. For example, in the case of chronic non-malignant pain, they would need to carefully balance the risks and benefits of long-term opioid prescription:

With [malignant pain] . . . your aim always is to get complete relief of pain . . . For chronic pain . . . you've got to weigh up . . . the potential side effects . . . you are not necessarily going to get them pain free because they've got the rest of their lives to live.

Seamark 2013²¹¹

Health-care professionals explicitly compared prescribing practices for palliative care and chronic non-malignant pain:

We tend to focus too much on pain control for palliation as opposed to just everyday clients. Certainly nobody wants to die in pain, but nobody wants to live in pain either.

Kaasalainen 2007¹⁸⁷

It might be that you are . . . just getting them through the last few weeks . . . so maybe we feel more comfortable, whereas the patient with chronic back pain you don't how long you're going to be treating . . . I think it's a risk-benefit issue.

Spitz 2011²¹⁷

Walking a fine line

The theme 'walking a fine line'^{153,157,162,177,187,188,190,194,208,211,217} described the need for HCPs to carefully balance the benefits and adverse effects of opioids. On the one hand, emphasising adverse effects might lead to unnecessary pain, but, on the other hand, emphasis on pain control might lead to harm or abuse:

There are two mistakes you make . . . the mistake of undertreating or of giving medicines that end up being sold or used for unintended purposes. You're going to make errors both ways, and I think it's generally better to risk opiates being misused versus not treating someone's pain.

Berg 2009¹⁵⁷

This sense of walking a fine line was heightened when prescribing opioids for older adults, and HCPs felt that specialised knowledge was necessary to effectively prescribe opioids to older people with chronic pain. Although in theory age should not affect decisions, there was a sense that in practice it did:

But there are safety issues, and at the end of the day if they came to grief . . . you'd feel . . . excessive side effects . . . that contributed to some major event . . . So we walk a fine line sometimes between giving adequate pain relief and giving safe treatment.

Gooberman-Hill 2011¹⁷⁷

Older people metabolise medication differently . . . so you don't want to give them medication that's going to impair their ability to function . . . You don't want to interfere with their ability to make judgements and so on, so I don't like using opioids in elderly people at all.

Ruiz 2010²⁰⁸

I just have a hard time prescribing opioids in my older patients. I get frightened with 80+ year olds; how are they going to respond? Am I going to absolutely drop them to the floor even with a small dose?

Spitz 2011²¹⁷

Social guardianship

The theme 'social guardianship'^{153,155,157,174,175,177,190,191,208,211,217} described a culture hostile to opioid use and the professional taboo of prescribing opioids for chronic non-malignant pain. HCPs compared their own practise with that of their colleagues and were worried that they would be harshly judged by their peers for prescribing opioids. Some felt a personal responsibility to protect society from the consequences of opioid misuse and viewed certain patients with suspicion, particularly those who requested opioids. To protect society, some implemented strategies to control patients' behaviour (e.g. bottle checks, opioid contracts and background checks). HCPs were also concerned that opioid prescriptions might be diverted to others:

I am a naysayer on opiates . . . too much of my day is spent policing how many [opioids] have been prescribed and how many times a patient is a return patient and how often they visited requesting opiate prescriptions.

Kilaru 2014¹⁹⁰

If you prescribe to a population where you think diversion is going on, you definitely have a responsibility. I also worry about who is getting the drug, is it my son? I mean, we are members of society after all.

Fontana 2008¹⁷⁵

Some HCPs discussed indicators of potential abuse (e.g. lost prescriptions, early requests for medication and frequent attendance), whereas others acknowledged that these might actually indicate poorly managed pain and, therefore, a greater need for pain relief:

If people are taking it genuinely for pain they tend to stick to the prescribed dosage . . . addicts tend to be the ones who are always ordering early . . . you don't lose your tablets if you are . . . getting great benefit from them for pain.

Baldacchino 2010¹⁵³

The concern would be is this pain real, or is it just put on to obtain opioid? . . . I mean, an assessment of the pain and whether I think it's genuine or not. I think it's very difficult; it's something I'm currently dealing with at the moment, and not very successfully.

Seamark 2013²¹¹

Moral boundary work

The theme 'moral boundary work'^{153,155,157,174,175,177,190,191,198,208,211,213,217,218} was underpinned by the clinical work of deciding whose pain is 'real' and thus who should be prescribed opioids. There was a sense of an underlying unwillingness to prescribe opioids for pain with no clear biomedical cause, or if symptoms were vague. Suspicion arose when there seemed to be dissonance between the patient's report of pain and the symptoms observed by the professional:

A lot of patients . . . they really need it . . . based on their underlying pathology . . . a patient who has a cancer or a real anatomic foundation . . . you have to count on more observation, combined with other clinical data . . . you pretty much know who is abusing and who is not.

Krebs 2014¹⁹¹

I think for patients who have chronic pain it's more challenging and I think that's the place where I'm constantly rethinking my practice . . . You're always on the fence: am I doing the right thing for my patient?

Kilaru 2014¹⁹⁰

Health-care professionals described good patients (e.g. those who made appropriate demands, took advice and did not cause trouble) and 'difficult' patients (the demanding, non-adherent and trouble-making):

For those patients that have a legitimate reason for wanting to take it and if I can trust them . . . most of these are older patients of mine. They never request early refills, they don't go to the [emergency room] in between visits to get them . . .

Krebs 2014¹⁹¹

Non-clinical moral judgements or gut feelings contributed to prescribing decisions. HCPs recalled episodes when they had made a mistake by trusting 'the wrong' patient. Over time they felt that they had become better at making the right decision. Examples were given of HCPs getting their fingers burned when prescribing opioids, along with an understanding that lessons had to be learnt from mistakes:

At times there was a feeling of being 'deceived' by patients so that you prescribed opioids:

I've had trust in people, and it's been betrayed – sometimes the trust is betrayed multiple times. I find I'm not always that great a judge of who to trust and who not to trust, so, I don't trust my own judgement on trust all the time . . . I think people feel like they've been violated, you know, cheated, like they've been taken advantage of. I feel some of that, too. Ultimately you feel you've made a poor judgement, and you get mad at yourself . . . My impression was that he had a true ankle problem. Then you find out it was all lies, but you know, at that time and at that moment, that was my assessment, and I did it. You're allowed to make mistakes.

Berg 2009¹⁵⁷

Prescribing . . . is a sort of rather woolly, nebulous product . . . I've been moulded by the successes and the failures . . . we all learn on the hoof, don't we? . . . I think everybody's fingers get burnt with people who you give the opioids to with a more trusting attitude.

Seamark 2013²¹¹

However, some sensed the dangers of judging a book by its cover and acknowledged that basing clinical decisions on their gut feeling might not be fair or accurate:

There's a disconnect . . . even if it's the sweetest little 85-year-old woman who looks like your grandmother, versus, you know, some guy from the ghetto wearing his pants down at his knees . . . it shouldn't really matter.

Starrels 2014²¹⁸

Regulations and guidelines

The theme 'regulations and guidelines'^{155,157,175,177,190,191,217,218} described HCPs' views about external regulation of opioid prescription (specifically guidelines, opioid agreements and drug screening). Some described a negative view of prescribing guidelines and felt that they interfered with professional autonomy, an example of the 'legislature practising medicine without a licence':¹⁹⁰

You're there to help them and they can tell you their deepest, darkest secrets, but yet you're policing them . . . I like to see the person as a person . . . You can't do your job when you are thinking about these things.

Krebs 2014¹⁹¹

There could be negative implications to that if patients are actually leaving the emergency department because of the way they interpret that [regulations] poster . . . there's potential that sick patients could actually leave your emergency department when they need help.

Kilaru 2014¹⁹⁰

Health-care professionals feared legislative reprimand if they prescribed outside guidelines:

My name is on that bottle . . . I had a patient die. He took the entire bottle, and the police came to see me because they found him dead with the empty bottle with my name on it . . . I won't accept that burden.

Fontana 2008¹⁷⁵

[GPs] are scared of being in front of the coroner . . . with a load of angry family and relatives wagging a finger at us, when all we're trying to do is really help . . . if it works, brilliant. If it doesn't work . . . people are very quick to criticise.

Gooberman-Hill 2011¹⁷⁷

Others described a negative view of opioid prescribing agreements and drug screening as striking a blow at the heart of a patient–clinician relationship by creating mistrust and hostility:

It can really strike a major blow to trust in the doctor patient relationship when you ask someone to sign a piece of paper . . . if there is already mistrust between the patient and the doctor, it could heighten that mistrust . . .

Starrels 2014²¹⁸

Some used guidelines pragmatically as leverage or to justify decisions and thus help them to deal with 'challenging' patients:

I tell them this is standard protocol. I'm not singling you out. I'm not picking on you. I'm not treating you like an addict. This would happen to anybody. If you take our chronic pain meds long enough, anybody will become physically dependent on them.

Krebs 2014¹⁹¹

[An agreement] gives me leverage or comfort in discontinuing the medication . . . because we've kind of laid it out from the beginning that those behaviours were not okay . . . it made my life a little easier, but I'm not sure it did the patients a giant service.

Starrels 2014²¹⁸

Others described a more positive attitude to regulation. For example, opioid agreements could be useful in establishing boundaries and opening up honest discussion:

I think it improves the care, because you are able to then have more open and frank discussions around their pain . . . and [about] other things going on in their life . . . In the best of circumstances it actually will make for a deeper more trusting relationship.

Starrels 2014²¹⁸

Conceptual framework: prescribing opioids

Our conceptual model (Figure 8) hinges on the HCP's need to decipher the ambiguity surrounding opioid prescription for chronic non-malignant pain (should I, shouldn't I?). Social suspicion and hostility towards opioids (social guardianship) will tip the balance for prescribing towards the negative, whereas the pre-eminence of pain (pain is pain) might tip the balance towards prescribing. The decision is not clear-cut. First, HCPs might make non-clinical judgements about the person (moral boundary work). Second, they must determine the balance of positive and adverse effects for each individual (walking a fine line). Last, there is a sense of professional ambivalence towards prescribing guidelines (regulations and guidelines). This conceptual model demonstrates the complexity of making a decision to prescribe opioids to someone with non-malignant pain. It also demonstrates that the decision is influenced by intra- and interpersonal factors and broader external concerns.

Discussion

We aimed to undertake a QES using the methods of meta-ethnography reported by Toye and colleagues⁸ to increase our understanding of what it is like for HCPs to provide health care to people with chronic non-malignant pain and thus to inform improvements in the experience and quality of health care. At the outset of this study, we had intended to include HCPs' experience of treating chronic non-malignant musculoskeletal pain in order to mirror a previous QES of patients' experience of chronic non-malignant musculoskeletal pain. However, our preliminary reading indicated that HCPs' experiences of treating chronic non-malignant pain were not boundaried to a particular body system, but were a summative experience that cut across conditions. After consultation and agreement with our advisory group, we therefore sought and attained permission from the funders to remove 'musculoskeletal' from our study title. Our search strategy then focused generically on chronic non-malignant pain. Further research might focus on specific diagnoses (such as neuropathic, visceral, pelvic or phantom pain or arthritis) to explore potential similarities and differences in HCPs' experiences of treating these conditions.

This is the first time that such a synthesis has been undertaken on this topic. Already we know that, from the patient perspective, the experience of health care can be adversarial.⁸ Patients with chronic pain struggle to affirm their sense of self; their present and future appears unpredictable; they search for a credible explanation for their pain; they do not always feel heard, believed or valued by HCPs; and they struggle to prove themselves in the face of scepticism.⁸ Our findings can help us to consider this experience of health care from the perspective of HCPs. We identified six themes from 77 studies that help to explain the HCP experience of providing health care to people with chronic non-malignant pain and six themes specific to

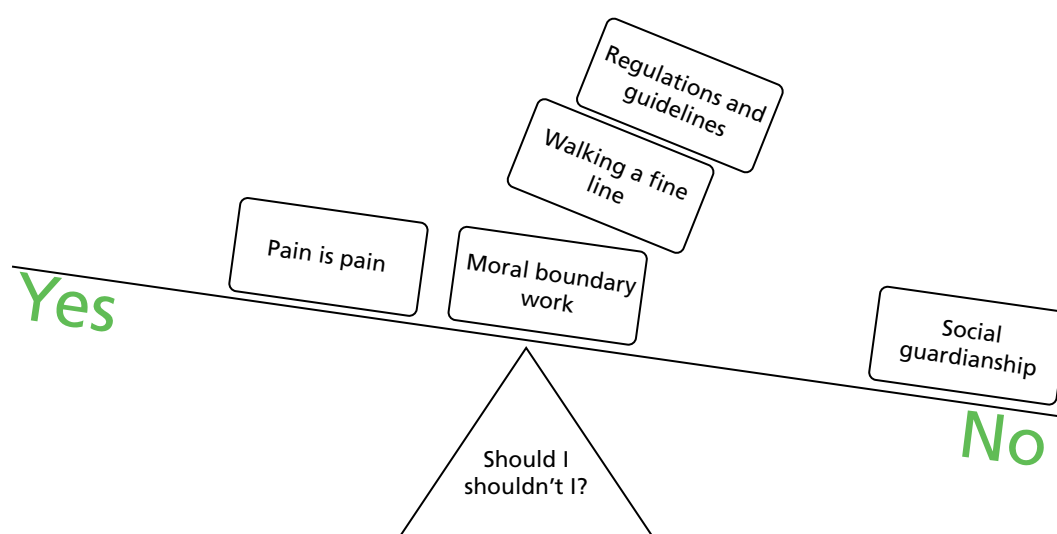


FIGURE 8 Conceptual model: the ambiguity of prescribing opioids to patients with chronic non-malignant pain.

the experience of prescribing opioids to this group of patients. The innovation of our conceptual model is to propose a series of tensions that are integral to the experience of providing health care to people with chronic non-malignant pain. These tensions were between a dualistic biomedical model and an embodied psychosocial model; professional distance and proximity; professional expertise and patient empowerment; the need to make concessions to maintain therapeutic relationships and the need for evidence-based utility; and patient and health-care system advocacy. This model may be transferable to other chronic conditions.

A sceptical cultural lens and siren song of diagnosis

From the HCP perspective, the findings highlight a deep-seated cultural scepticism towards people with chronic non-malignant pain. This scepticism influences a powerful gravitational pull towards the biomedical model and siren song of medical diagnosis. The biomedical model takes disease to be an objective biomedical category not influenced by psychosocial factors or judgements about moral worthiness.²²⁷ Alternatively, the biopsychosocial model focuses on the embodied experience of illness.²²⁷ HCPs describe the challenge of navigating juxtaposed biomedical and biopsychosocial models. Although many HCPs may feel that they adhere to a biopsychosocial model, our findings indicate a dualistic approach whereby HCPs make a sudden shift to biopsychosocial explanations after exhausting attempts to decipher a diagnosis. In essence, psychosocial aspects are 'grafted onto the somatic' core (p. 44).²²⁸ Our interpretation supports the need for a more embodied biopsychosocial model that focuses on the personal meaning of pain. Embodiment theory has its roots in the writings of Merleau-Ponty,²²⁹ who breaks down the dualism of mind and body and focuses on the personal meaning of suffering. Personal meaning always accompanies the experience of pain.^{228,230} From a patient perspective, both covert and overt scepticism from HCPs, along with a cultural pull towards biomedical explanations, may help to explain why patients with chronic pain can experience a strong sense of not being believed.⁸ An abrupt shift in explanation towards the psychosocial by HCPs may exacerbate this loss of credibility, particularly in the context of persisting cultural dualisms (real/unreal, physical/mental, medical/psychological and body/mind). We know that people in chronic pain can feel a profound sense of shame and stigma because they do not fit the dominant medical discourse and that they struggle to prove to others that they are a credible and 'good' person.⁸ A more embodied non-dualistic biopsychosocial approach at the outset might help HCPs to support patients with chronic pain. These findings highlight that both HCPs and their patients share a struggle to negotiate dual explanatory models for pain. However, although the patient might persevere in efforts to find a medical diagnosis in order to gain credibility, the HCP might make an abrupt shift towards the biopsychosocial, and this is a potential source of tension.

Navigating the patient–clinician health-care interface

From the HCP perspective, our findings demonstrate the complexity of navigating the interface between themselves, patients and the health-care system. Navigating the patient–clinician borderland, the challenge of dual advocacy and the craft of pain management all indicate the challenges of managing this interface. The finding that HCPs sometimes make concessions that are not evidence based in order to maintain effective relationships may have implications for policy and practice. For example, it might help to explain why an increasing number of HCPs are prescribing opioids despite very limited evidence for long-term opioid therapy for chronic pain before the end of life,^{231–233} or why a doctor may refer a patient for an investigation when its efficacy is not well supported. The findings demonstrate that HCPs can struggle to find a balance between providing professional expertise and empowering their patients. At times, this can mean that they feel pressed into making decisions of limited clinical utility. The short circuit can be to take control of the clinical encounter, thus alienating the patient from any sense of control.

Our findings indicate that HCPs can find it a challenge to simultaneously represent the patient and the health-care system. They also demonstrate the benefits of mutual respect and shared knowledge for an effective chronic pain service, and suggest that recognising mutual skills and combined knowledge of colleagues rather than focusing on differences might benefit health care. From the patient perspective, we know that the person with chronic pain experiences an ambivalent relationship with the health-care system and can feel trapped in a system that is not meeting their needs.⁸ The craft of pain management describes clinical work as an experience-based competence that at times could feel constrained by external guidelines. At times HCPs felt underskilled in chronic pain management, particularly in relation to psychological therapies.

Personal costs

The findings demonstrate that from a HCP perspective there are emotional costs involved in providing health care to people with chronic non-malignant pain. HCPs can feel that they have failed in their professional duty to find and fix a medical problem. On the other hand, those who take time to understand their patients' personal losses can feel 'bombarded by despair'.²²⁰ We know that from a patient perspective there are also profound personal losses. The person is struggling with an overwhelming loss of present and future self and does not always feel valued as a person in health care. They look back nostalgically to the past self and feel a sense of great loss. They describe a fundamental need for their HCP to believe and bear witness to their suffering.⁸ Our findings have clinical implications: how do we support HCPs to sit alongside patients and yet not be able to fix them, without experiencing the losses of failure? It might be useful for clinical educators to consider overlaps in training need between palliative care, which by definition does not aim at cure, and chronic pain management. HCPs included in this review did not discuss their own personal life context, which may, at times, contribute to and make HCPs less resilient to personal or professional losses. Our findings suggest that it may be useful to frame a more embodied approach as one that has advantages for both patients and HCPs. Although seeing the patient as a fellow human can impose a personal burden, it can also provide a mutual and positive human experience.²³⁴ Sitting alongside a patient frames the clinician as an advocate, rather than adversary. Charon²³⁵ demonstrates that sitting alongside a patient, although emotional, can have a positive impact on work satisfaction by allowing clinicians to interact on a human level. This may take the pressure off clinicians to fix their patients.

Using the conceptual model in clinical education

We present our conceptual model as a mixing console that can help us to understand, think about and modify our experience of providing health care to people with chronic non-malignant pain. The model is underpinned by a series of tensions:

- biomedical model versus an embodied psychosocial model
- professional distance versus professional proximity
- professional expertise versus patient empowerment
- making concessions to maintain an effective relationship versus biomedical utility
- patient advocate and health-care system advocate.

Health-care professionals can use this mixing console to help them to think about their encounters with patients with chronic pain, for example:

- Am I making a sudden shift to psychosocial explanations?
- Am I considering psychosocial factors at the outset?
- Do I understand this patient's experience or am I too distant?
- Am I trying to enforce my decisions?
- Am I making a concession and for whose benefit?
- How is my patient experiencing this dual advocacy?
- What personal impact is this having on me?
- Am I feeling like I have failed?

Our console will allow HCPs to consider their individual mix and contemplate a re-mix if necessary in order to successfully support people with chronic pain, or to individualise their approach for different patients. Using the mixing console could potentially be used to help appreciate and alter the tensions during a consultation with a patient. This fits in with Mead and Bower's¹⁵ framework for patient-centred care, which recognises both the importance of the therapeutic alliance and the influence that HCPs' personal characteristics and responses can have on care. Further research to explore the usefulness of this console within a therapeutic encounter would add benefit to this QES.

Opioid prescription

Despite recent guidelines suggesting that patients might not benefit, there has been a significant rise in opioid prescription for chronic non-malignant pain.^{231,232} The findings do not indicate that the limited efficacy of opioids for chronic non-malignant pain is the primary barrier to prescribing. Our findings indicate ambiguity surrounding the prescription of opioids to patients with chronic pain. Although some were aware of the adverse effects of opioids, they were concerned that choosing not to prescribe would lead to unnecessary suffering. Although HCPs discussed the potential harm from opioids, there was also a feeling of personal responsibility to police and protect society from opioid misuse. A more positive and collaborative frame for making the decision to prescribe, or not, might be useful, for example emphasising the limited efficacy and serious adverse effects of opioids.^{231,232} The findings demonstrate ambivalence towards the external regulation of opioid prescription. There was a sense that regulation limited professional autonomy and that there should be freedom to prescribe. Some felt that regulation could lead to mistrust and hostility. Others felt that opioid agreements could help to open up honest discussion. Others used them to justify difficult or unpopular decisions. In view of the rise of opioid prescription and recent guidance, further research to explore HCPs' experience and view of guidelines would be useful. Although we did not set out to explore the experience of prescribing opioids for chronic non-malignant pain, the findings indicate that opioid prescription is an important facet of the HCP experience. In qualitative research methodologies, unexpected findings can demonstrate that the reviewers have not been constrained by a priori concepts. Research to explore patients' experience of deciding to take opioids for chronic pain is also timely. This would help us to understand the motivations and experiences of those with chronic pain and the HCPs trying to manage that pain.

Film outputs from qualitative research

We produced a film output to present themes from this QES. Findings from a previous meta-ethnography of patients' experience of living with chronic pain have received > 29,000 views. YouTube comments suggest that it resonates with experience and that watching the film can make people think. The film has also been utilised in pain management education.²²⁰ Qualitative research aims to understand a variety of perspectives and it can be challenging to demonstrate specific impacts on health care. Its value includes encouraging us to think outside our own experience and challenge our values and practices.¹⁰ Parsons and colleagues²³⁶ argue that the impact of visual representations of qualitative research might be a 'subtle shift in viewers' perspectives'. Visual media lend themselves to an interactive, or dialectic, style of learning,²³⁷⁻²⁴⁵ which can evoke, provoke and stimulate ideas.²³⁹ They can be powerful because they facilitate emotional engagement beyond that from reading reports.^{236,246} Performative methods have been used in clinical education to facilitate learning through dialogue²⁴⁶⁻²⁴⁹ and to develop empathetic understanding.^{241,242,250,251} Through film, viewers can access different perspectives in a safe environment and explore their own clinical practice. Although there are diverse ways of knowing,²⁵² evidence-based medicine has a strong strand of objective modes of knowledge, or episteme. Greenhalgh²⁵³ invites us to challenge accepted ways of knowing and incorporate other forms of knowledge, knowledge that can be conceptualised as a dynamic process occurring at the interface between ideas and audience. Future research to explore the impact of this film on relevant stakeholders would help us to understand the impact of qualitative research films on health-care experience.

Methodological issues

Are we constrained by a priori concepts?

The findings of qualitative research will inevitably be the authors' interpretation. It is impossible to conceptualise, or think, without existing categories in mind, and researchers will always bring existing ideas and points of view into their thinking and analysis. This should not be seen as a weakness in qualitative methodologies; on the contrary, useful qualitative analysis hinges on utilising existing concepts. This resonates with Blumer's sensitising rather than definitive concepts: 'definitive concepts provide prescriptions of what to see, sensitising concepts merely suggest directions along which to look' (p. 7).²⁵⁴ It is more useful to consider qualitative analysis not as a linear, but as a dialectic process in which tension between existing and new concepts can

create innovative ways of thinking.²⁵⁵ Researchers contemplate their data with an open mind but not an empty head.²⁵⁶ Existing concepts become a limitation only if you are reluctant to change them. This is why it is necessary to collaboratively challenge developing concepts in a team environment in which reviewers feel safe to challenge each other. The strength of our team was that members felt free to agree, disagree or change their mind within the safety of the group.

How much should we search for?

Campbell and colleagues,²⁷ in their meta-ethnographies of 25 and 37 studies, suggest that '40 papers is realistic [in order] . . . to maintain sufficient familiarity'. Toye and colleagues²⁸ suggest that it is possible to include a larger number of studies in reviews. The size of a QES will ultimately depend on the aims and resources available (both financial and published). Researchers and funders should consider whether or not an exhaustive search of the literature will add value. A growing volume of published qualitative research means that there will inevitably be an increase in the potential number of studies for qualitative syntheses. Reviewers therefore need to consider what they include. However, there are issues to consider when deciding what not to include. Fundamentally, how do we determine which are the most valuable studies?

We made the decision to systematically search for, and include, all papers that we felt were 'good enough'. Some qualitative researchers suggest a more targeted approach to sampling data. For example, you could stop searching for new data when 'theoretical saturation' is reached (i.e. when collecting additional data seems to add no more insight).⁴¹ This is more comparable with the sampling strategies commonly used in qualitative research. One option might be to start your search with a single database and expand as analysis proceeds.²³ However, there are some important issues to consider when deciding what to include or exclude from QES. Importantly, reviewers do not necessarily find the conceptually rich papers first. This means that reviewers may need to read and consider several 'thin' studies before finding rich and key concepts. Sometimes gravitational concepts develop from a small number of studies; yet at other times it may take a larger number. We also need to consider recent development that aims to evaluate confidence in QES, specifically GRADE-CERQual for determining confidence in reviews. GRADE-CERQual considers adequacy of data (overall determination of the degree of richness and quantity of data supporting a review finding) and coherence (whether or not the finding is well grounded in the primary studies and whether or not reviewers have considered variations across studies), as important determinants of confidence. We feel that a systematic exploration of the available research can contribute to confidence in findings. It is also important to consider that if review findings are to be used to influence policy and practice we may be more confident in the adequacy of data if the finding is drawn from a large pool. Although it can be time-consuming, it can add confidence if we systematically search for all relevant studies.

How can we determine confidence in review findings?

There have been calls to standardise reporting of qualitative syntheses,^{29,257,258} but there is currently no agreed way of making an assessment of confidence for QES. As qualitative analysis is underpinned by an interpretive framework, efforts to regulate it will always be complicated by varying opinions vis-à-vis quality.^{34,36} Establishing confidence in the output of qualitative research synthesis (ConQual)²⁵⁹ and GRADE-CERQual³⁷ offer overlapping but distinct approaches for determining confidence in QES.

'Methodological limitations' ('dependability')

Both ConQual²⁵⁹ and GRADE-CERQual³⁷ consider the quality of included primary studies to be an important determinant of confidence in a particular review finding. GRADE-CERQual refers to this as methodological limitations and ConQual refers to this as dependability. However, determining quality in qualitative research is complex and unresolved. Although there are a growing number of frameworks for appraising the quality of qualitative research,^{27,34} and a growing number of reviewers appraising primary studies,²⁴ a significant number of qualitative reviewers take a legitimate choice not to appraise for the purpose of QES.²⁷ This choice does not imply low quality. Indeed, although quality appraisal might help us to recognise methodological flaws, it does not necessarily help us to appraise the value of findings.³⁶

We found that the CASP was a useful way of framing discussions on quality and papers that we considered to be 'key' did gain higher CASP scores. However, this threshold was not clear-cut and it is unlikely to be useful as a threshold score for determining inclusion in and exclusion from qualitative syntheses. There was a much higher level of agreement on CASP score³⁵ than in our previous study.⁸ This may be because the reviewers have developed their view on what constitutes quality over the process of working together for several years. 'Satisfactory' papers all scored ≥ 20 on CASP, similar to a previous study in which satisfactory papers scored ≥ 19 . However, two studies scoring > 20 were still excluded as 'fatally flawed'. The reviewers found it challenging to decipher the concepts in these studies.

We also aimed to test the usefulness of a list of themes developed from a qualitative study embedded in a previous meta-ethnography funded by the HSDR programme (see *Table 2*).³⁶ Unlike CASP, these themes were developed specifically for meta-ethnography. Findings from this appraisal confirmed that qualitative studies are very likely to report their rationale, aim and sample adequately. However, there are areas for improvement, specifically:

1. Qualitative authors do not always give readers adequate insight into the researcher's perspective.
2. They do not always report how they have challenged their own interpretation.
3. They do not always use appropriate exemplification to show that their interpretation has come from the data.
4. They do not always articulate their concepts with adequate clarity.

Fundamental to conceptual qualitative syntheses is the capacity of included studies to make the reviewers think and develop concepts. Studies reported as having 'changed the thinking' of at least one reviewer tended to score higher. Appraisal comments (see *Appendix 1*) suggest that even if it did not *change* thinking, the primary studies did encourage reviewers to think.

Finally, although reviewers agreed that if studies were 'key', 'fatally flawed' or 'irrelevant',²³ the large majority of studies were judged to be 'satisfactory'. This confirms findings from our previous study.⁸ It would be useful to find ways in which we can be more discerning about what to include. We felt that the CASP question 10 (how valuable is this study?) had face value in providing a particular reviewer's appraisal of value. Further research to explore ways of deciphering the potential value of particular qualitative findings would be useful, particularly in the context of research proliferation.

Reviewers and funders need to consider why we are spending a lot of time appraising studies and whether or not this has any impact on review findings. Does it make any significant difference if we include studies with a poor methodological report^{27,260} (particularly if our unit of analysis is a concept)? Fundamentally, some concepts will exert a strong influence on concept development and other concepts will not. The reasons for this are complex and will depend on factors that include a priori knowledge of the reviewer and the persuasiveness of the written primary findings. We think that, for the purposes of determining confidence of review findings for GRADE-CERQual, an appraisal of either 'satisfactory' or 'not satisfactory' would therefore be fit for purpose. QES is a time-consuming process and time might be better spent abstracting concepts rather than pettifogging over fine details of appraisal, particularly when there is no agreed method for determining what good quality is.

What is a satisfactory study for qualitative evidence synthesis? Suggested themes for future research

For future QES, the questions shown in *Table 14* might help reviewers to consider whether or not a study is satisfactory for inclusion into meta-ethnographies. This list of questions is intended as food for thought, rather than as an appraisal checklist. Future research could explore the utility of these questions for conceptual QES. Importantly, reviewers need to consider whether or not their chosen appraisal criteria have any real impact on their decision to include studies. Although we agree that it is vital to exclude studies that are methodologically fatally flawed as this will have a direct impact on the truth claims (e.g. if the study is unethical), we would argue that as long as studies are satisfactory, then appraisal for conceptual reviews

TABLE 14 What a satisfactory study is for conceptual QES: questions to consider

CASP question	Answer
Was there a clear statement of the rationale and aims? ^a	Yes/no
Was the research design appropriate to address the aims of the research? ^a	Yes/no
Was the recruitment strategy appropriate to the aims of the research? ^a	Yes/no
Has the relationship between researcher and participants been adequately considered? ^a	Yes/no
Has the researcher adequately challenged their own interpretation?	Yes/no
Does the researcher's interpretation come from the original data?	Yes/no
Can you identify the concepts in this study (or do you find yourself recoding)?	Yes/no
Have the findings made you think?	Yes/no
Is the research potentially valuable? ^a	Yes/no
a Questions drawn from CASP.	

hinges on being able to extract clear concepts. Studies that lack conceptual insight will not influence analytical decisions and, therefore, are unlikely to have an impact on conceptual development; they will therefore do no harm.

Relevance

We agree that studies included in a review should be relevant to the topic under review. However, studies that we rated as 'partially', 'indirectly' or 'uncertainly' relevant also contained useful concepts (i.e. although a study may be partially relevant, it may contain some concepts relevant to the topic under exploration). We think that for the purposes of determining confidence of review findings for GRADE-CERQual reviewers should include only concepts that are relevant to the topic, but these concepts may be present in studies that are partially or indirectly relevant.

Adequacy

Adequacy regards the depth of data supporting each finding. Lewin and colleagues³⁷ define it as 'the overall determination of the degree of richness and quantity of data supporting a review finding'. However, how can reviewers/readers determine the degree of richness or quantity of data that is adequate to support a finding? It may be useful to conceptualise adequacy in terms of gravity and gravitational pull. One could argue that as data contribute to the development of a concept, they begin to create their own gravitational pull that moulds them into shape. At this point the number of data is adequate. Concepts develop as part of a dialectic process and it would therefore be impossible to define the point at which the concept is pulled into a coherent shape. Thus, determination of adequacy is complex and subjective. Qualitative researchers should demonstrate that their interpretations have gravitational pull. This can be challenging as an appraisal of gravitational pull is qualitative. However, it can help the reader if reviewers provide clear information about the source of their concepts, along with clear and appropriate exemplification of this concept. If the reader feels that the narrative exemplar does not illuminate the reviewers' concept then this will decrease the gravity of that concept. This resonates with Munn and colleagues'²⁵⁹ concept of 'credibility' as the 'the congruency between the author's interpretation and the supporting data' (p. 4²⁵⁹).

It also important to consider that a single concept can exert a strong gravitational pull and that gravity has a qualitative component. We advocate caution regarding making truth claims purely on sheer weight of data; the tale of the Emperor's New Clothes has taught us the validity of a small voice. Single concepts can

stimulate a new way of thinking or highlight possible areas in which research is timely. We need to consider our own views about the purpose of qualitative research:

- Do we aim to stimulate thinking and understanding through qualitative research?
- Do we aim to increase our understanding of different experiences of living in the world?
- Do we aim to develop theories that underpin complex processes?

In all these cases, size may not matter. Indeed, we would want our syntheses to include some unique concepts that challenge our thinking. However, qualitative reviewers cannot ignore the issue of size; they face the same questions as primary researchers grappling with the questions – how many qualitative interviews is enough?²⁶¹ A large review can appear, and may arguably be, more ‘adequate’ than a small review. If 40 studies support a concept, then this is in some way different from only five studies supporting it. If the aim is to stimulate ideas and contribute to a particular field of enquiry, then ‘adequacy’ may not be our only concern. If our aim is to develop robust gravitational concepts, we should consider both the economy and diseconomy of scale. For our purposes, we have gained confidence from including a large body of qualitative studies. We cannot know whether or not these findings would be qualitatively different had we included fewer studies. For the purposes of determining confidence of review findings for GRADE-CERQual reviewers, it is useful to provide a tally of the concepts that support each finding so that the reader can make their own assessment about adequacy for purpose. The power of concepts to make us think, however, is not based on quantity of data included. However, qualitative health researchers live in a research culture that values numbers and economies of scale and there is a real danger that potential stakeholders continue to undervalue the contribution that qualitative research can make towards improving people’s experiences of health care.

Coherence

Coherence considers the consistency (and difference) across studies. We agree that it is important to demonstrate to readers that concepts have not been cherry-picked and that it is therefore important to present concepts that do not fit the analysis. However, we do not feel that inconsistency necessarily negates confidence in a particular finding. An insightful concept might appear in a single study or it may represent a point of view that is untapped in other studies. We agree that it is useful to provide information about consistency for the same reasons that it is important to provide information about adequacy; readers should know where the concepts come from. We think that for the purposes of determining confidence of review findings for GRADE-CERQual it may be useful to provide a tally of individual studies supporting the finding and, importantly, to present concepts that do not fit the conceptual analysis. However, as we have said:

- Qualitative research does not aim to be representative or *true* in a positivist sense, but aims to generate useful ideas.
- The tale of the Emperor’s New Clothes has taught us the validity of a small voice.

It is important to consider these issues when utilising tools such as ConQual²⁵⁹ and GRADE-CERQual³⁷ as well as reporting guidelines, such as the imminent meta-ethnography reporting guidelines (eMERGe; www.stir.ac.uk/health-sciences-sport/research/groups/emerge/; accessed 22 January 2018). Although these tools can definitely encourage reviewers and readers to think, the issue of quality in qualitative research is complex and these tools cannot guarantee confidence in findings. Thus, access to a GRADE-CERQual chart in an appendix does not remove the need for intellectual scrutiny on the part of reviewer or reader. Indeed, the tools were not intended to encourage a tick-box exercise, but to allow the reviewers and readers to consider issues of quality and utility. We need to consider that readers working outside an interpretive methodological tradition might not be familiar with the complexity of quality in qualitative research. For example, although both ConQual²⁵⁹ and GRADE-CERQual³⁷ advocate quality appraisal, we cannot ignore the fact that a significant number of reputable qualitative reviewers have pro-actively chosen not to appraise.²⁷ This is not surprising in the light of the fact that there is no agreed means of determining quality. We need to consider

the dangers of yielding to methodological monopolies and continue to challenge our ideas about what is good.

Credibility

Munn and colleagues²⁵⁹ propose an additional criterion, credibility, for establishing confidence in the findings of qualitative research syntheses. Credibility is a global evaluation of 'fit' ('equivocal', 'unequivocal' or 'unsupported') between the primary data and the reviewers' interpretations as demonstrated by adequate exemplars. This resonates with concept-indicator fit.²⁶² We feel that concept-indicator fit underpins good-quality qualitative research and would therefore consider it fundamental to a quality assessment.³⁶ However, deciding whether or not the author has provided 'an illustration that is beyond reasonable doubt'³⁶ is the reader's personal judgement.

Conceptual insight

Conceptual insight is fundamental to meta-ethnographic aims and, therefore, primary authors need to provide an adequate and clear description of their concept. In addition to clarity, a concept should allow reviewers to think with it. Neither conceptual clarity nor strength is considered in either GRADE-CERQual or ConQual. There were 18 studies^{11,150,155,160,162,169,173,178,181,187,188,192,196,197,202,206,208,219} that provided inadequate conceptualisation in at least one finding (see *Appendix 2*) and one study¹⁸⁸ from which we felt unable to include a single concept into our analysis.

Overall confidence in review

This was a large QES and we rated our confidence as high when more than half of the reviews ($n \geq 39$) supported the finding. However, there is no agreed way to determine how many data provide sufficient gravity to support the validity of a concept. One concept may be weightier than 10 other concepts. Attempts to rate overall confidence raise important issues for reviewers. Importantly, are we in danger of slipping into a positivist fallacy that qualitative research can help us to find 'the' right answer. Qualitative research encourages us to think outside our own box and develop a questioning approach that can be utilised in policy and practice decision-making. It cannot provide the answer, but can provide concepts to think with and encourage us to see things from a different vantage point and to challenge our thinking and practice.

Chapter 4 Implications for education, policy and practice

We aimed to undertake a QES using the methods of meta-ethnography reported by Toye and colleagues⁸ to increase our understanding of what it is like for HCPs to provide health care to people with chronic non-malignant pain and thus to inform improvements in the experience and quality of health care. Patients report dissatisfaction with their HCP interaction¹³ and the relationship between patients and HCPs can have a significant effect on health outcomes. Already we know that, from the patient perspective, the experience of health care can be adversarial.⁸ It seems likely that HCPs' responses can have an impact on quality of care. Thus, understanding the experience of providing health care to people with chronic non-malignant pain from the perspective of the HCP can have important implications for delivery of health care, decision-making and health-care quality.

Our findings can help us to consider the experience of health care from both perspectives and understand tensions that may contribute to this adversarial experience. Specifically:

- The findings indicate an underlying scepticism that might contribute to an adversarial relationship between HCP and patient. Believing patients' experiences may provide a more secure foundation for an effective therapeutic relationship.
- The findings indicate a dualistic approach whereby HCPs make a sudden shift from biomedical to biopsychosocial explanations for pain after exhausting attempts to decipher a diagnosis. This abrupt shift may exacerbate a sense of loss of credibility for patients.
- The findings indicate that some HCPs engage in judgements about what is real or not real, which are underpinned by a cultural duality of real (biomedical) and not real (psychosocial).
- The findings suggest that an embodied, rather than dualistic, biopsychosocial model that focuses on the personal meaning of pain from the outset might help to lessen the adversarial experience and also reduce the HCP's sense of failure.
- The findings have clinical and educational implications. How can we enable HCPs to manage the tensions that underpin the experience of providing health care to people with chronic non-malignant pain? How do we recognise and support the complexity of skills and emotional cost of providing health care to people with chronic non-malignant pain?
- The findings highlight the benefits of reciprocity, mutuality and collaboration between HCPs and the benefits of being able to break down or cross professional boundaries and hierarchies.
- The findings highlight a need to consider the emotional costs to HCPs of treating patients with chronic pain.

We invite HCPs to use our 'mixing console' to help them to think about their encounters with patients. This console may be transferable to other chronic conditions.

Chapter 5 Recommendations for research

- Future research to explore HCPs' experiences with chronic non-malignant pain in diverse ethnic groups, gender-specific contexts and in older people living in the community would make a valuable contribution to the evidence base on people's experiences of living with chronic pain.
- Future research to explore the application and usefulness of our conceptual model in education and practice would add value to this research.
- Future research to explore the application and usefulness of our film output in education and practice would add value to this research.
- Future research to explore the value added to QES by quality appraisal and the relevance of GRADE-CERQual for evaluating confidence in meta-ethnography findings would make a useful contribution to QES methodology.
- Further research on how QES can be used to inform commissioning, policy and practice would contribute to knowledge on effective dissemination of qualitative research.

Acknowledgements

We would like to thank:

- the National Institute for Health Research HSDR programme for funding this study
- the authors of the included qualitative studies
- the HCPs who shared their stories for the included studies
- Cathy Jenkins for her contribution to the visualisation of our conceptual model
- our study advisory group and Meredith Newman for chairing this group of patients and HCPs
- our anonymous reviewers whose feedback strengthened the final report.

Contributions of authors

Fran Toye (Dr, Qualitative Researcher) made a substantial contribution to the design, acquisition, analysis and interpretation of data, drafted the first, subsequent and final versions of the report and designed the visual outputs.

Kate Seers (Professor, Qualitative Researcher) made a substantial contribution to the design, acquisition, analysis and interpretation of data, revised all versions of the report for important intellectual content and approved the final version.

Karen Barker (Associate Professor, Qualitative Researcher) made a substantial contribution to the design, acquisition, analysis and interpretation of data, revised all versions of the report for important intellectual content and approved the final version.

Publications

Toye F, Seers K, Barker KL. Meta-ethnography to understand healthcare professionals' experience of treating adults with chronic non-malignant pain. *BMJ Open* 2017;**7**:e018411.

Toye F, Seers K, Tierney S, Barker K. A qualitative evidence synthesis to explore healthcare professionals' experience of prescribing opioids to adults with chronic non-malignant pain. *BMC Fam Pract* 2017;**18**:94.

Data sharing statement

Requests for access to data should be addressed to the corresponding author.

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Appendix 1 Log of appraisal comments

First author/year	Appraisal comments
Afrell 2010 ¹⁵¹	This was a very thought provoking account. Made me think directly about applicability of qualitative findings to clinical practise. Resonated with my own work. Highly relevant practical application of qualitative work. Key themes about ambivalence, resonates with Victor Turner again (fructile chaos)
Allegretti 2010 ¹¹	Exemplars well chosen. Surprised by idea that HCPs used biopsychosocial model (but in teaching hospital). Reinforces Helman's ideas that it is a challenge to impose cultural models that do not fit onto someone (here patients). Interesting but not key
Åsbring 2003 ¹⁵²	Fibromyalgia and chronic fatigue not entirely sure which diagnosis for clinicians, mixed diagnosis makes it a bit muddy but agree about overlap so adds insight. Does not describe methods of rigour, just 'Strauss and Corbin'. Not clear always if interpretation from data. Not all key ideas have exemplars. Sometimes drift into discussion not grounded in the data. Very negative view of HCP. However, resonates with notion of moral narrative
Baldacchino 2010 ¹⁵³	Findings brief. Changes thinking – I had not considered this subgroup. This is the first study on barriers to opioid prescription. Very minimal report of method but 'no harm'. Maybe limited applicability as about those with history of substance abuse
Barker 2015 ¹⁵⁴	Co-authored
Barry 2010 ¹⁵⁵	Minimal abstraction of ideas (19 themes). Can identify ideas as limited abstraction. Not great. Little analytical work. Might add to a theme but no key ideas. Hard to read
Baszanger 1992 ¹⁵⁶	Ethnographic style and findings not always clear. Not always clear if interpretation from data. Ethnographic style. Not lengthy quotes. High on interpretation of observations. Interesting but very long winded and needed deciphering. Hard read
Berg 2009 ¹⁵⁷	Like idea of ambiguity – focus on problem of opioids or focus on problem of pain control. Insight into ambiguities of medical practise. It is not clear cut (diagnostic ambiguity)
Bergman 2013 ¹⁵⁸	Did not change thinking, but introduction to difficulties of opioids prescription. Resonant account
Blomberg 2008 ¹⁵⁹	Not great rationale for focus groups but OK. Insight into district nurse. I liked idea introduced that nurse can become passive if collaboration and organisational support are not available. Provides a clear model. A bit so-what-ish
Blomqvist 2003 ¹⁶⁰	Thin on exemplar
Briones-Vozmediano 2013 ¹⁶¹	No change of ideas but resonant. Insightful comment: <i>no matter what you give them the pain does not go away</i>
Cameron 2015 ¹⁶²	Not entirely sure how study recruited 'convenience sample'. Thinking not changed but made me think about phenomenology of age and pain. Heterogeneous sample makes it more difficult to transfer findings. However, may help to contribute to a theme on ageing and pain
Cartmill 2011 ¹⁶³	Not change thinking but made me think about organisation focus in chronic pain management. Areas to learn from. Focus of aim = effective teamwork in functional restoration programme
Chew-Graham 1999 ¹⁶⁴	Method not described (just 'grounded theory'). Not always clear if interpretation comes from data. Draws heavily on knowledge from a previous study and sociological frameworks. Presents bleak view of HCPs. Raises some resonant points
Clark 2004 ¹⁶⁵	Thinking more about persistent pain management in residential care. I had discarded it but seem to be shared characteristics exacerbated by the issue of age. Not always clear if it comes from the data. Narrative exemplars a bit thin
Clark 2006 ¹⁶⁶	Thinking more about pain in nursing homes. Importance of auxiliary nurse and collaborative with physicians. Query transferability as relates to interviews after a global pain intervention study in nursing homes. Interviewed those in treatment arm and control arm. However, some resonant accounts
Corbett 2009 ¹⁴⁵	Thin description. Out

First author/year	Appraisal comments
Corrigan 2011 ¹¹⁶	No comment. Out
Côté 2001 ¹⁶⁷	New insight from chiropractors – did not anticipate sense of professional isolation
Coutu 2013 ¹⁶⁸	Difficult to get clear sense of HCP as findings from HCP–patient dyads. Dyads make it difficult as observing space between two parties so difficult to decipher experience from a particular stance. A bit thin
Crowe 2010 ¹⁴⁶	Sample not described. No gravitational ideas. No evidence of analysis/idea abstraction
Dahan 2007 ¹⁶⁹	Themes not pulled together very clearly but second-order concepts OK. Nothing new but resonant. Makes interesting parallel to dealing with terminal illness. Also difficulties that arise from being 'in the middle' in primary care
Daykin 2004 ¹⁷⁰	Not changed thinking but thoughtful account. Shows complexity of 'good/bad' (i.e. not just about chronicity/complexity but also patient locus of control). Daykin feels that HCPs do not judge challenging patient on personal characteristics (this may be naive). Enjoyed and know author well. A very generous interpretation of HCPs
Dobbs 2014 ¹⁷¹	Several ideas in one heading. No change but have become more inclined to include nursing assistant and residential papers. Need to include persistent pain in residential care (ethical decision)
Dysvik 2010 ¹⁴⁸	No comment
Eccleston 1997 ¹⁷²	Really nice intro set in social science literature. Q-analysis – quantitative treatment of narrative data. Only one account relevant to this study. I would not include as no clear thematic ideas but maybe decision grounded in dislike of quantifying qualitative data. I think it sits outside phenomenological tradition. (Other reviewers 'in')
Espeland 2003 ¹⁷³	Resonant. Bit thin but adds to a theme
Esquibel 2014 ¹⁷⁴	Do not think concepts in tables match narrative analysis. Conceptualised a bit too far and making assumptions. Changed thinking – insight into construction of good and bad patients. Very nice introduction and description of benefits of narrative. Some nice data
Fontana 2008 ¹⁷⁵	No change but reinforcing need to include this cohort. Themes beginning to resonate in this group (e.g. time/communication empathy)
Fox 2004 ¹⁷⁶	Researchers perspective not available and this is important in a 'critical analysis' which is grounded in a perspective. Seems to come from data, but suspicious because highlights power structures. Not considered nursing perspective before. Makes me think about different organisational/cultural perspective. Interesting analysis. Quite negative view of HCPs
Gooberman-Hill 2011 ¹⁷⁷	Not always clear gravity. Not changed thinking. Different prescribing opinions for type of pain (e.g. elderly and comorbidity). Chronic joint pain. A little uncertainty on inclusion? Arthritic (only because know the team)
Gropelli 2013 ¹⁷⁸	Thin. Appears to have an axe to grind. Exemplars not well chosen to support themes. Untranslatable. Third reviewer 'in'
Hadker 2011 ¹⁴⁷	No comment. Out
Hansson 2001 ¹⁷⁹	A bit thin as this is a small section on a wider study on patient experience. Verging on uncertain but potential useful bolstering to theme. A bit thin and difficult to transfer outside specific context. Might contribute to a thematic category
Harting 2009 ¹⁸⁰	A priori ideas make it difficult and felt 'shoe horned' a bit. A bit deductive. Uses a framework. A priori themes interfere with findings and not clear if interpretation entirely from data. Titles reduce clarity. A priori themes reduce clarity
Hayes 2010 ¹⁸¹	Not always a strong gravitational pull to a clear idea. A bit generic. Thin but resonant. Like term 'it's a fuzzy concept' – reminds me of difficulties of anomaly
Hellman 2015 ¹⁸²	Bit repetitive, but adds gravity
Hellström 2015 ¹⁸³	No new thinking. But like the ideas of anomaly. GPs avoid biomedical anomaly by referring on (shift buck). This is like liminality (fructile chaos, anomaly, liminality – positive spin could be phoenix idea). Problem = very harsh representation of HCP (e.g. talk about 'deviant personality') Otherwise ideas nice. In science an anomaly is used for a situation where one is faced with something that challenges the paradigm induced expectations that govern normal science

First author/year	Appraisal comments
Holloway 2009 ¹⁸⁴	No change but more insight into nursing assistant role in front line. Nursing assistant an important part of the team. Very similar to Holloway 2009 ¹⁸⁵
Holloway 2009 ¹⁸⁵	No new ideas but brings in nursing assistant views. Importance of HCP team
Howarth 2012 ¹⁸⁶	Thinking about collaborative working and space/physical environment. Team work. Clear and concise gravitational themes
Kaasalainen 2007 ¹⁸⁷	Some lovely data that gives insight into experience and suggests a way forward: <i>nobody wants to die in pain but no one wants to live in pain either people think she is in bed resting . . . well guess what, she's in bed looking at the ceiling and thinking about her pain</i>
	Mum
Kaasalainen 2010 ¹⁸⁸	Not always abstracted ideas fully. Titles a bit generic and ideas hidden a bit
Kaasalainen 2010 ¹⁸⁹	Resonant ideas
Kilaru 2014 ¹⁹⁰	Developing ideas on opioids
Kotarba 1984 ¹⁴⁹	No comment
Krebs 2014 ¹⁹¹	No change but thinking about concept of 'gut feeling' used to judge patients. Like the sampling 'who may think differently on this topic to you'
Kristiansson 2011 ¹⁹²	Difficult to extract ideas from narrative. Use 'stanzas'. Found narrative style difficult to extract second-order concepts
Liu 2014 ¹⁹³	Resonant but on thin side
Löckenhoff 2013 ¹⁹⁴	Verging on uncertain. Thin study. Towards deductive/framework approach. Focus on timelines rather than allowing data to speak. Also older age is 60+ years so not that old
Lundh 2004 ¹⁹⁵	Positive view of HCPs. I liked it. A positive non-judgemental view
MacNeela 2010 ¹⁹⁶	Uncertain whether or not to include. I did not follow methods. A bit scrappy. Poor organisation of findings section made extraction of ideas cumbersome. Some interesting findings. Titles not consistent. Mixed-method qualitative design
McConigley 2008 ¹⁹⁷	Not given examples to support analysis. Highlight issues for careworkers and non-professional staff. Satisfactory but uncertain transferability – about implementation of guidelines for pain in residential care (Australia) could be in this section or in guidelines section. Thin on exemplar
McCrorie 2015 ¹⁹⁸	Not different but resonant. 'Unfolding' of treatment with no plan. Responsibility shift again. Ideas coming through
Mentes 2004 ¹⁹⁹	Thin
O'Connor 2015 ²⁰⁰	Not changed thinking, but thinking about team dynamic and context of care. Theme emerging = team/integrative context of care
Øien 2011 ²⁰¹	Very thin account of 11 cases. Norwegian specialty so query transferability. However, interesting theme of seeking common ground. Some resonance
Oosterhof 2014 ²⁰²	A bit thin on HCP ideas. Based on one example – analysis does not come through. A bit thin but resonant and may contribute
Parsons 2012 ²⁰³	Mixed private NHS and complementary therapy – some difficulty deciphering patient HCP data. May contribute to wider theme. Some interesting idea development. Deductive pole of analysis
Patel 2008 ²⁰⁴	Made me think about overlap between experience of different cultural groups that could help us to understand and articular challenges. I enjoyed reading this. Concise and clear. Raised questions and food for thought, particularly in an anthropological context
Patel 2009 ²⁰⁵	Does not offer much more than Patel 2008, ²⁰⁴ but different themes on service provision that might contribute to a theme
Paulson 1999 ²⁰⁶	Not always clear if interpretation from HCP or patient. Data not always used to support theme. Not changed thinking but made me think about gender expectations in HCP/patient discussions/attitudes. Demonstrates need for a gender study. Some important ideas but not very good illustrative data at times

First author/year	Appraisal comments
Poitras 2011 ²⁰⁷	Deductive? First insight into relationship between professional groups and its impact on effectiveness of care. I do not like the way that authors 'dump' codes that are not consistent in accounts this does not fit qualitative philosophy. Negative case can illuminate constant comparison
Ruiz 2010 ²⁰⁸	Unable to decipher nurses from medical opinions in this
Schofield 2006 ¹⁴⁴	No comment
Schulte 2010 ²⁰⁹	Data a bit thin. No in-depth exemplars. Removed sections about interviews with patients. This is about relationship with second and third care specialists. Limited scope. Does not probe GPs expectations of pain clinics and that is a shame, in view of title. Overall a bit thin but may contribute to a category
Scott-Dempster 2014 ²¹⁰	Co-authored
Seamark 2013 ²¹¹	Changed thinking – consider that there is a perceived difference to cancer pain. Resonated and helps build concepts
Shye 1998 ²¹²	Hard to tell how 'valuable research is' at outset. Change thinking – yes; thought about the game-playing of tests that occurs (context demands/patient demand). Scope uncertainty – not specifically about use of guidelines for patients with chronic pain, but included to scan results for relevance. Nice description of relevant themes. Made me think of complexity of 'playing the game' that GPs have to do
Siedlecki 2014 ²¹³	Sometimes quotes do not match interpretation. Made me think about those with chronic pain on wards. An important insight into experiences of patient with chronic pain in an acute setting (e.g. do not cut home medications when in hospital if person has chronic pain). Some methodological flaws but still something positive about it. Not sure what the grounded theory is
Slade 2012 ²¹⁴	Clear and interesting themes with well supported and thoughtful discussion. Presents a key idea related to paradox of acute vs. chronic pain: (1) acute model (gain trust, quick gains, medication expectations); (2) chronic model. Makes me think – why do we need two models at all? Not helpful to use two models for gaining improvements. Possible negative impact on gaining trust
Sloots 2009 ²¹⁵	No comment
Sloots 2010 ²¹⁶	A few ideas not transparent and, therefore, not included – low gravity. Not changes thinking about culture differences as barrier. The barriers appear same if we frame any patient as if they were from a different culture. Some interesting thoughts. A bit on the thin side. Different cultural perspective sparks ideas
Spitz 2011 ²¹⁷	Used mixed methods so focuses on numbers a bit. A bit thin but insight into different influences in older patients
Starrels 2014 ²¹⁸	This paper gets a high score and raises issue of score not telling all. It is a bit thin but resonant and adds to gravity of themes
Stinson 2013 ²¹⁹	Not full gravitational pull but different perspective from younger people with pain. May contribute
Thunberg 2001 ¹⁵⁰	Thoughtful overarching core category of ambiguity which might lead to an important theme in analysis. Introduces concept of ambiguity: (a) ideal (holistic); (b) practice – practices of medicine based on clear professional boundaries, biomedicine, tests. Idea – ambiguity akin to liminality (fructile chaos) – Victor Turner
Toye 2015 ²²⁰	Co-authored
Tveiten 2009 ²²¹	Bit vague on sample/nice ideas/metaphors. I am thinking more and more about tension – what should do and path of least resistance. Nice metaphor 'wondering together'; 'short circuit' it is easier to let our own competence be paramount and not always allow participation. Highlight tension between empowerment and professional role 'easier said than done'
Wainwright 2006 ²²²	Like it. Arm pain – not specific origin. May be key but difficult to tell early on. Made me think about problems of bio-psych-social as linear rather than venn-diagrammatically (see Victoria Grace)

First author/year	Appraisal comments
Wilson 2014 ²²³	Made me consider discourse of medicine and boundary management in health care. This explores boundary work of medicine language and process. Not all relevant but what is relevant is key to debate (potentially)
Wynne-Jones 2014 ²²⁴	Lacks structure and some areas of themes repeated in sections. However, resonant and in scope
Zanini 2014 ²²⁵	Supports well what I know and includes key ideas. A useful account of themes that is likely to be included in review findings

Appendix 2 Concepts included in and excluded from the analysis

Findings with inadequate conceptualisation

1. Allegretti 2010:¹¹ convergence – many barriers exist to care.
2. Barry 2010:¹⁵⁵ physician factors – continuity of care.
3. Blomqvist 2003:¹⁶⁰ activities to manage pain.
4. Blomqvist 2003:¹⁶⁰ activities to manage pain – no activity.
5. Cameron 2015:¹⁶² psychology, negative thoughts, coping and reinforcement.
6. Dahan 2007:¹⁶⁹ the guideline – practical issues in relation to low-back pain guideline implementation.
7. Espeland 2003:¹⁷³ the GP's professional dignity.
8. Gropelli 2013:¹⁷⁸ inability to recognise an individualised plan of care.
9. Gropelli 2013:¹⁷⁸ nurses' perceptions about older adults and families.
10. Gropelli 2013:¹⁷⁸ nurses' perceptions and the possible lack of self-awareness cause barriers.
11. Hayes 2010:¹⁸¹ treatment and management.
12. Kaasalainen 2007:¹⁸⁷ barriers and facilitators – barriers.
13. Kaasalainen 2007:¹⁸⁷ barriers and facilitators – facilitators.
14. Kaasalainen 2010:¹⁸⁸ influential factors.
15. Kaasalainen 2010:¹⁸⁸ nurse practitioner role in pain management in long-term care.
16. Kaasalainen 2010:¹⁸⁸ perceived outcomes.
17. Kristiansson 2011:¹⁹² helped her.
18. Kristiansson 2011:¹⁹² life hurts.
19. Kristiansson 2011:¹⁹² sad and still.
20. MacNeela 2010:¹⁹⁶ professional knowledge – a schema for back pain.
21. McConigley 2008:¹⁹⁷ strengths to assist in the implementation process.
22. Oosterhof 2014:²⁰² experiences concerning the treatment outcome (maintaining new behaviour).
23. Paulson 1999:²⁰⁶ needing human support (feeling alone and forlorn).
24. Paulson 1999:²⁰⁶ needing human support (searching for sympathy).
25. Paulson 1999:²⁰⁶ struggling for relief from pain (not being taken seriously).
26. Paulson 1999:²⁰⁶ struggling for relief from pain (seeking explanation and wanting to be cured).
27. Ruiz 2010:²⁰⁸ value of ancillary services.
28. Stinson 2013:²¹⁹ pain management strategies (physical strategies).
29. Stinson 2013:²¹⁹ service delivery recommendations.
30. Thunberg 2001:¹⁵⁰ professionals' caring reality: hierarchy.
31. Thunberg 2001:¹⁵⁰ professionals' caring reality: medical–physical treatment.

Concepts that did not explore health-care professionals' experiences

1. Coutu 2013:¹⁶⁸ harmony scenario.
2. Esquibel 2014:¹⁷⁴ utility and proper usage.
3. Esquibel 2014:¹⁷⁴ addiction.
4. McCrorie 2015:¹⁹⁸ patient drivers to seek help.
5. Oosterhof 2014:²⁰² experiences concerning the interaction – being involved.
6. Oosterhof 2014:²⁰² experiences concerning the interaction – being taken seriously.
7. Oosterhof 2014:²⁰² experiences concerning the treatment outcome (organisational problems).
8. Parsons 2012:²⁰³ legitimating suffering (patients' beliefs about receiving a diagnosis label for their pain).
9. Parsons 2012:²⁰³ legitimating suffering (the interaction between patients and health professionals' beliefs about pain causation).

10. Parsons 2012:²⁰³ the evolving nature of patients' and health professionals' models of understanding chronic musculoskeletal pain (patients' and health professionals' beliefs about pain causation).
11. Parsons 2012:²⁰³ the evolving nature of patients' and health professionals' models of understanding chronic musculoskeletal pain (patients' adaptation of causation belief).
12. Parsons 2012:²⁰³ development and tailoring of consultation and treatment approaches throughout patients' illness careers (patients' beliefs about consulting for and treatment of chronic musculoskeletal pain).
13. Sloots 2009:²¹⁵ credibility with regard to foreign diagnosis.
14. Sloots 2009:²¹⁵ trust in the rehabilitation physician.
15. Wilson 2014:²²³ articles of association.
16. Wilson 2014:²²³ calling for withdrawal of the guidance.
17. Wilson 2014:²²³ extraordinary general meeting.
18. Wilson 2014:²²³ the blog.

Concepts with limited transferability beyond specific context

1. Clark 2006:¹⁶⁶ changes in pain knowledge, attitudes and practice – knowledge.
2. Côté 2001:¹⁶⁷ approaches to manage occupational injuries – contact with the workplace.
3. McConigley 2008:¹⁹⁷ toolkit development.
4. Ruiz 2010:²⁰⁸ value of computerised patient record system as a support tool.
5. Wilson 2014:²²³ guideline development group membership list.

Concepts with insufficient primary data to develop robust themes

Return to work

1. Côté 2001:¹⁶⁷ barriers and facilitators of return to work – related to workplace.
2. Côté 2001:¹⁶⁷ timely return to work.
3. Hellman 2015:¹⁸² multimodal rehabilitation created a foundation for a continuous return to work process – improving conditions for returning to work.
4. Hellman 2015:¹⁸² multimodal rehabilitation created a foundation for a continuous return to work process – creating a sustainable action plan.
5. Hellman 2015:¹⁸² return to work – a long-term process reaching beyond the time frames of multimodal rehabilitation.
6. Hellman 2015:¹⁸² the patients' needs and conditions directed features within rehabilitation.
7. Hellman 2015:¹⁸² the professionals' attitudes directed features within rehabilitation – promoting health and well-being rehabilitation warranty.

Ethnicity

1. Dobbs 2014:¹⁷¹ cultural, religious, and gender influences of resident pain care by certified nursing assistants.
2. Patel 2008:²⁰⁴ communication.
3. Patel 2008:²⁰⁴ consulting behaviour.
4. Patel 2008:²⁰⁴ presentation of pain.
5. Patel 2009:²⁰⁵ addressing patients psychosocial needs via counselling and cognitive-behavioural therapy.
6. Patel 2009:²⁰⁵ opportunities for increasing practitioners' understanding of pain in a multicultural community.
7. Patel 2009:²⁰⁵ provisions required for community support.
8. Sloots 2009:²¹⁵ communication.
9. Sloots 2009:²¹⁵ responsibility for illness and treatment.

10. Sloots 2009:²¹⁵ symptom presentation.
11. Sloots 2010:²¹⁶ reasons for dropout in rehabilitation patients (communication and use of interpreters).

Gender

1. Paulson 1999:²⁰⁶ needing human support (being weary of life).
2. Paulson 1999:²⁰⁶ needing to be manly – being ashamed.
3. Paulson 1999:²⁰⁶ struggling for relief from pain (suffering from variable pain that is difficult to express and explain).
4. Paulson 1999:²⁰⁶ needing human support (withholding one's innermost feelings).
5. Paulson 1999:²⁰⁶ needing to be manly – being strong and effective.
6. Paulson 1999:²⁰⁶ needing human support (suffering reduced self-confidence).
7. Paulson 1999:²⁰⁶ naive reading.

Older people

1. Blomberg 2008:¹⁵⁹ detecting pain problems.
2. Blomberg 2008:¹⁵⁹ detecting pain problems – patients' abilities to communicate pain to district nurses.
3. Blomqvist 2003:¹⁶⁰ care-related pain.
4. Blomqvist 2003:¹⁶⁰ concealed pain.
5. Blomqvist 2003:¹⁶⁰ endured pain.
6. Blomqvist 2003:¹⁶⁰ inarticulate pain.
7. Cameron 2015:¹⁶² communication, confusion and questioning.
8. Cameron 2015:¹⁶² consultation time and historical events (time of life).
9. Cameron 2015:¹⁶² information retrieval.
10. Cameron 2015:¹⁶² mobility in older adults.
11. Cameron 2015:¹⁶² physiology, comorbidities and signs of ageing.
12. Clark 2004:¹⁶⁵ behavioural and visual cues to pain.
13. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – patient-related barriers (difficulty administering medications to patients).
14. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – patient-related barriers (cognitive impairment).
15. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – patient-related barriers (patients' reluctance to report pain).
16. Fox 2004:¹⁷⁶ facilitation of the assessment and treatment of pain – family support.
17. Kaasalainen 2007:¹⁸⁷ lack of awareness of residents' pain.
18. Löckenhoff 2013:¹⁹⁴ age differences in time horizons (long-term prognosis).
19. Löckenhoff 2013:¹⁹⁴ self-management of chronic pain.
20. Mentis 2004:¹⁹⁹ pain on movement.
21. Ruiz 2010:²⁰⁸ pain as part of growing old.

Concepts that did not fit the conceptual analysis

1. Barry 2010:¹⁵⁵ logistical factors – ancillary staff.
2. Barry 2010:¹⁵⁵ logistical factors – insurance coverage.
3. Fontana 2008:¹⁷⁵ critical analysis.
4. Holloway 2009:¹⁸⁴ initiating clinical care.
5. Holloway 2009:¹⁸⁵ perfect positioning (rewards of getting it right).
6. Kaasalainen 2010:¹⁸⁸ interactions with long-term care staff and managers.
7. Liu 2014:¹⁹³ instigator implementing non-pharmacological interventions.
8. Löckenhoff 2013:¹⁹⁴ age differences in time horizons (treatment planning).
9. Lundh 2004:¹⁹⁵ variation 1.

10. Oosterhof 2014:²⁰² experiences concerning the treatment outcome (learning new behaviour).
11. Scott-Dempster 2014:²¹⁰ 'it's not a one trick pony'.
12. Seamark 2013:²¹¹ cost.
13. Siedlecki 2014:²¹³ core concepts/taking ownership.
14. Stinson 2013:²¹⁹ barriers to care (patient-specific barriers).
15. Stinson 2013:²¹⁹ pain management strategies (support systems), HCPs recognised the importance of peer support for patients.

Concepts included in analysis

1. Afrell 2010:¹⁵¹ a change of the relation to the patient – facing the negative.
2. Afrell 2010:¹⁵¹ a change of the relation to the patient – reconsidering the professional mandate.
3. Afrell 2010:¹⁵¹ a change in the patient – starts the processing.
4. Afrell 2010:¹⁵¹ the physiotherapists' insights into the patient as a person – the patient's view of the connection between body and life comes out.
5. Afrell 2010:¹⁵¹ the physiotherapists' insights into the patient as a person – the pain is near to feelings.
6. Afrell 2010:¹⁵¹ the physiotherapists' insights into the patient as a person – the pain mirrors life experience.
7. Afrell 2010:¹⁵¹ the physiotherapists' insights into the patient as a person – the patient has the words.
8. Allegretti 2010:¹¹ convergence – current treatments are ineffective.
9. Allegretti 2010:¹¹ convergence – patients suffered from severe or serious chronic low-back pain.
10. Allegretti 2010:¹¹ divergence – treatment goal of reducing pain versus improving function.
11. Allegretti 2010:¹¹ divergence – biomedical versus biopsychosocial model.
12. Allegretti 2010:¹¹ divergence – the importance of a definitive diagnosis.
13. Åsbring 2003:¹⁵² illness and the professional role.
14. Åsbring 2003:¹⁵² illness versus disease.
15. Åsbring 2003:¹⁵² moral judgement of illness.
16. Åsbring 2003:¹⁵² moral judgement of patient.
17. Åsbring 2003:¹⁵² strategies to manage patients with illness – adjusting the ideal to reality.
18. Åsbring 2003:¹⁵² strategies to manage patients with illness – doing something concrete.
19. Åsbring 2003:¹⁵² strategies to manage patients with illness – giving the patient responsibility.
20. Åsbring 2003:¹⁵² strategies to manage patients with illness – keeping a distance or getting closer.
21. Åsbring 2003:¹⁵² strategies to manage patients with illness – trying to find causes other than biomedical ones.
22. Åsbring 2003:¹⁵² strategies to manage patients with illness – trying to get the patient to accept the situation.
23. Baldacchino 2010:¹⁵³ factors associated with abuse, misuse or diversion of prescription opioids.
24. Baldacchino 2010:¹⁵³ judgements about whether or not patient is substance user affects chronic non-cancer pain management.
25. Baldacchino 2010:¹⁵³ management of chronic non-cancer pain among people with a history of substance abuse.
26. Baldacchino 2010:¹⁵³ physicians' attitudes to prescribing opioids for chronic non-cancer pain management.
27. Barker 2015:¹⁵⁴ it's quite a long way from physiotherapy.
28. Barker 2015:¹⁵⁴ reconstructing 'acceptance'.
29. Barker 2015:¹⁵⁴ understanding pain as an embodied experience.
30. Barker 2015:¹⁵⁴ it's quite a long way from physiotherapy.
31. Barker 2015:¹⁵⁴ value-based goals a profound motivation for positive change.
32. Barry 2010:¹⁵⁵ physician factors – opioid agreements.
33. Barry 2010:¹⁵⁵ logistical factors – addiction referrals.
34. Barry 2010:¹⁵⁵ logistical factors – diagnostic workup.

35. Barry 2010:¹⁵⁵ logistical factors – pain management referrals.
36. Barry 2010:¹⁵⁵ logistical factors – time.
37. Barry 2010:¹⁵⁵ patient factors – attitudes towards opioid analgesics.
38. Barry 2010:¹⁵⁵ patient factors – cost of specialty pain management.
39. Barry 2010:¹⁵⁵ patient factors – motivation.
40. Barry 2010:¹⁵⁵ patient factors – physician responsiveness to patients' pain.
41. Barry 2010:¹⁵⁵ physician factors – aberrant behaviours.
42. Barry 2010:¹⁵⁵ physician factors – coexisting disorders.
43. Barry 2010:¹⁵⁵ physician factors – expertise in pain management.
44. Barry 2010:¹⁵⁵ physician factors – expertise in treating co-occurring chronic pain and opioid addiction.
45. Barry 2010:¹⁵⁵ physician factors – interest in pain management.
46. Barry 2010:¹⁵⁵ physician factors – pain assessment.
47. Baszanger 1992:¹⁵⁶ centre 1 – establishing the patients pain situation.
48. Baszanger 1992:¹⁵⁶ centre 1 – formulating advice to patients (a logic of description and demonstration).
49. Baszanger 1992:¹⁵⁶ centre 1 – formulating advice to patients (face-to-face relations and the work of justification).
50. Baszanger 1992:¹⁵⁶ centre 2 – establishing the patient's pain situation.
51. Baszanger 1992:¹⁵⁶ centre 2 – formulating advice to patients a logic of explanation and conviction.
52. Baszanger 1992:¹⁵⁶ centre 2 – mutual involvement and the work of agreeing.
53. Berg 2009:¹⁵⁷ practising in a context of ambiguity – decision-making frameworks.
54. Berg 2009:¹⁵⁷ practising in a context of ambiguity – response to ambiguity.
55. Berg 2009:¹⁵⁷ practising in a context of ambiguity – the ambiguity of pain.
56. Berg 2009:¹⁵⁷ practising in a context of ambiguity; decision-making frameworks – pain management strategies.
57. Berg 2009:¹⁵⁷ practising in a context of ambiguity; decision-making frameworks – perception and management of treatment risks (risk of deception).
58. Berg 2009:¹⁵⁷ practising in a context of ambiguity; decision-making frameworks – perception and management of treatment risks.
59. Berg 2009:¹⁵⁷ practising in a context of ambiguity; decision-making frameworks – perception and management of treatment risks (risk of disciplinary consequences).
60. Berg 2009:¹⁵⁷ practising in a context of ambiguity; decision-making frameworks – perception and management of treatment risks (risk of abuse).
61. Berg 2009:¹⁵⁷ treatment goals.
62. Berg 2009:¹⁵⁷ acknowledgment of the reality of pain and the search for objective evidence (primary care practitioners).
63. Bergman 2013:¹⁵⁸ recognition of patient individuality and consideration of relationship history.
64. Bergman 2013:¹⁵⁸ role of discussing pain versus other primary care concerns.
65. Blomberg 2008:¹⁵⁹ detecting pain problems – other professionals' pain care collaborations with district nurses.
66. Blomberg 2008:¹⁵⁹ detecting pain problems – the organisation's pain care support regarding district nurses.
67. Blomberg 2008:¹⁵⁹ district nurses involvement in pain care.
68. Blomberg 2008:¹⁵⁹ responding to pain problems.
69. Blomqvist 2003:¹⁶⁰ exaggerated pain.
70. Blomqvist 2003:¹⁶⁰ real pain.
71. Blomqvist 2003:¹⁶⁰ self-inflicted pain.
72. Blomqvist 2003:¹⁶⁰ trivial pain.
73. Briones-Vozmediano 2013:¹⁶¹ diagnostic approach (health professionals).
74. Briones-Vozmediano 2013:¹⁶¹ evaluation of the health professional–patient relationship.
75. Briones-Vozmediano 2013:¹⁶¹ therapeutic management (health professionals).
76. Cameron 2015:¹⁶² consultation time and historical events (consultation time).
77. Cameron 2015:¹⁶² information retrieval.

78. Cameron 2015:¹⁶² physiology, comorbidities and signs of ageing.
79. Cameron 2015:¹⁶² resources.
80. Cartmill 2011:¹⁶³ communication and collaboration among colleagues.
81. Cartmill 2011:¹⁶³ organisational structure.
82. Cartmill 2011:¹⁶³ the client population.
83. Chew-Graham 1999:¹⁶⁴ making and negotiating a diagnosis.
84. Chew-Graham 1999:¹⁶⁴ the doctor–patient relationship – negotiation or conclusion.
85. Clark 2004:¹⁶⁵ relationship-centred cues to residents’ pain.
86. Clark 2004:¹⁶⁵ resident characteristics and attitudes – resident attitudes.
87. Clark 2004:¹⁶⁵ resident characteristics and attitudes – resident behaviours.
88. Clark 2004:¹⁶⁵ uncertainty in pain assessment.
89. Clark 2006:¹⁶⁶ changes in pain knowledge, attitudes and practice – attitudes.
90. Clark 2006:¹⁶⁶ changes in pain knowledge, attitudes and practice – practice.
91. Clark 2006:¹⁶⁶ progressive solutions and suggestions for changing practice.
92. Côté 2001:¹⁶⁷ approaches to manage occupational injuries – chiropractic’s strength in diagnosis and treatment.
93. Côté 2001:¹⁶⁷ approaches to manage occupational injuries – patient-centred care.
94. Côté 2001:¹⁶⁷ barriers and facilitators of return to work – related to the worker.
95. Côté 2001:¹⁶⁷ barriers and facilitators of return to work – related to rehabilitation.
96. Côté 2001:¹⁶⁷ barriers and facilitators of return to work – related to payer.
97. Coutu 2013:¹⁶⁸ little known about worker’s representations, modifiable problem targeted.
98. Coutu 2013:¹⁶⁸ little known about worker’s representations, non-modifiable problem targeted.
99. Coutu 2013:¹⁶⁸ scenario of differences between clinical judgement and worker’s representations.
100. Dahan 2007:¹⁶⁹ patient–doctor interaction and relationship.
101. Dahan 2007:¹⁶⁹ the guideline – practical issues in relation to low-back pain guideline implementation.
102. Dahan 2007:¹⁶⁹ the physician’s low-back pain treatment agenda.
103. Daykin 2004:¹⁷⁰ ‘good’ patients and the challenge of ‘difficult’ patients.
104. Daykin 2004:¹⁷⁰ ‘good’ patients and the challenge of ‘difficult’ patients – impact of treating difficult patients.
105. Daykin 2004:¹⁷⁰ developing craft knowledge.
106. Daykin 2004:¹⁷⁰ developing craft knowledge – enlarging one’s tool bag.
107. Daykin 2004:¹⁷⁰ developing craft knowledge – gaining patient mileage.
108. Daykin 2004:¹⁷⁰ developing craft knowledge – personal pain experience.
109. Daykin 2004:¹⁷⁰ pain beliefs within the therapeutic encounter.
110. Daykin 2004:¹⁷⁰ the role of empathy in certified nursing assistant’s care of residents with pain.
111. Dobbs 2014:¹⁷¹ attitudes as barriers to communication about resident pain care.
112. Dobbs 2014:¹⁷¹ worker strategies to detect pain.
113. Eccleston 1997:¹⁷² Q-analysis (professional accounts).
114. Espeland 2003:¹⁷³ access to radiology services.
115. Espeland 2003:¹⁷³ pressure from other health-care providers or social security.
116. Espeland 2003:¹⁷³ the GP’s expectations about the consequences of ordering radiography.
117. Espeland 2003:¹⁷³ the GP’s perception of patients’ wishes for radiography.
118. Espeland 2003:¹⁷³ the GP’s perception of whether or not the patient really is ill.
119. Espeland 2003:¹⁷³ the GP’s response of keeping control and trying to help.
120. Espeland 2003:¹⁷³ the GP’s uncertainty – radiography just to be sure.
121. Espeland 2003:¹⁷³ effect of chronic opioid therapy on doctor–patient relationship – examples of chronic opioid therapy embittering the doctor–patient relationship.
122. Esquibel 2014:¹⁷⁴ effect of chronic opioid therapy on doctor–patient relationship – perspectives on ideal and difficult patients.
123. Esquibel 2014:¹⁷⁴ effect of chronic opioid therapy on doctor–patient relationship – prescribing opioids (an unwanted burden, an ineffective solution).
124. Esquibel 2014:¹⁷⁴ right to pain medications.
125. Esquibel 2014:¹⁷⁴ understanding pain.

126. Fontana 2008:¹⁷⁵ critical analysis – in the best interest of society.
127. Fontana 2008:¹⁷⁵ critical analysis – in the best interest of the patient.
128. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – caregiver-related barriers (beliefs and knowledge).
129. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – caregiver-related barriers (insensitivity to patients' pain).
130. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – system-related barriers (documentation).
131. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – system-related barriers (insufficient time for nursing staff).
132. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – system-related barriers (lack of communication).
133. Fox 2004:¹⁷⁶ barriers to the assessment and treatment of pain – system-related barriers (frustration).
134. Fox 2004:¹⁷⁶ facilitation of the assessment and treatment of pain.
135. Fox 2004:¹⁷⁶ facilitation of the assessment and treatment of pain – demonstrating understanding and compassion.
136. Fox 2004:¹⁷⁶ facilitation of the assessment and treatment of pain – teamwork.
137. Gooberman-Hill 2011:¹⁷⁷ are opioids the best option – managing adverse effects and assessing vulnerable patients.
138. Gooberman-Hill 2011:¹⁷⁷ are opioids the best option – the importance of previous experience.
139. Gooberman-Hill 2011:¹⁷⁷ are opioids the best option – views about opioid addiction, withdrawal and misuse.
140. Gooberman-Hill 2011:¹⁷⁷ are opioids the best option.
141. Gropelli 2013:¹⁷⁸ failure to communicate.
142. Gropelli 2013:¹⁷⁸ lack of education.
143. Hansson 2001:¹⁷⁹ working guided by medical ethics.
144. Harting 2009:¹⁸⁰ confirmation stage.
145. Harting 2009:¹⁸⁰ decision stage.
146. Harting 2009:¹⁸⁰ implementation stage.
147. Harting 2009:¹⁸⁰ knowledge stage – acquainted with innovation.
148. Harting 2009:¹⁸⁰ knowledge stage – understanding of innovation.
149. Harting 2009:¹⁸⁰ persuasion stage.
150. Hayes 2010:¹⁸¹ definition and diagnosis.
151. Hellman 2015:¹⁸² a coherent link with external actors facilitated the return to work process – enabling collaboration.
152. Hellman 2015:¹⁸² conflicting interests between implicit attitudes and explicit guidelines.
153. Hellström 2015:¹⁸³ adhering to the biomedical paradigm.
154. Hellström 2015:¹⁸³ avoiding recognising fibromyalgia as a possible biomedical anomaly.
155. Hellström 2015:¹⁸³ establishing an instrumental relationship.
156. Hellström 2015:¹⁸³ managing clinical uncertainty.
157. Hellström 2015:¹⁸³ prioritising diagnostics.
158. Holloway 2009:¹⁸⁴ advocating for residents.
159. Holloway 2009:¹⁸⁴ clinical decision-making.
160. Holloway 2009:¹⁸⁵ extended roles – clinical judgements.
161. Holloway 2009:¹⁸⁵ extended roles – nagging.
162. Holloway 2009:¹⁸⁵ perfect positioning.
163. Holloway 2009:¹⁸⁵ perfect positioning (emotional attachment).
164. Holloway 2009:¹⁸⁵ perfect positioning (frontline).
165. Holloway 2009:¹⁸⁵ perfect positioning (knowing the resident).
166. Holloway 2009:¹⁸⁵ perfect positioning (teamwork).
167. Howarth 2012:¹⁸⁶ collective efficacy.
168. Howarth 2012:¹⁸⁶ interprofessional development through negotiated space.
169. Howarth 2012:¹⁸⁶ team maturity.
170. Kaasalainen 2007:¹⁸⁷ reluctance of health-care providers to use opioids.

171. Kaasalainen 2007:¹⁸⁷ uncertainty about the accuracy of pain assessment and diagnosis.
172. Kaasalainen 2007:¹⁸⁷ working to individualise pain treatments.
173. Kaasalainen 2007:¹⁸⁷ influence of physician trust of the nurse on prescribing patterns.
174. Kaasalainen 2010:¹⁸⁹ health-care providers.
175. Kaasalainen 2010:¹⁸⁹ residents/family.
176. Kaasalainen 2010:¹⁸⁹ system.
177. Kilaru 2014:¹⁹⁰ associations with underlying attitudes towards opioid prescribing.
178. Kilaru 2014:¹⁹⁰ attitudes towards guidelines – liability.
179. Kilaru 2014:¹⁹⁰ attitudes towards guidelines – patient diversion.
180. Kilaru 2014:¹⁹⁰ attitudes towards guidelines – physician autonomy.
181. Kilaru 2014:¹⁹⁰ attitudes towards guidelines – public health.
182. Kilaru 2014:¹⁹⁰ definition and awareness of guidelines – hospital-based guidelines.
183. Kilaru 2014:¹⁹⁰ definition and awareness of guidelines – state and national guidelines.
184. Kilaru 2014:¹⁹⁰ how physicians use guidelines – communication.
185. Krebs 2014:¹⁹¹ need to protect patients from harm.
186. Krebs 2014:¹⁹¹ inadequate time and resources.
187. Krebs 2014:¹⁹¹ opioid monitoring as a ‘law enforcement’ activity.
188. Krebs 2014:¹⁹¹ relying on general impressions of risk.
189. Kristiansson 2011:¹⁹² distressed, offended and disappointed.
190. Kristiansson 2011:¹⁹² prepare for a race.
191. Kristiansson 2011:¹⁹² build a safe relationship.
192. Kristiansson 2011:¹⁹² no help.
193. Kristiansson 2011:¹⁹² see how it goes.
194. Kristiansson 2011:¹⁹² she disappointed.
195. Kristiansson 2011:¹⁹² she was really sad.
196. Kristiansson 2011:¹⁹² very high risk.
197. Kristiansson 2011:¹⁹² wants to try.
198. Kristiansson 2011:¹⁹² her whole tiredness over me.
199. Kristiansson 2011:¹⁹² scolded.
200. Kristiansson 2011:¹⁹² while away one’s days.
201. Kristiansson 2011:¹⁹² will be challenged.
202. Kristiansson 2011:¹⁹² not obvious without own assessment.
203. Kristiansson 2011:¹⁹² receive a dressing-down.
204. Kristiansson 2011:¹⁹² want to examine before a doctor’s letter.
205. Liu 2014:¹⁹³ level of familiarity.
206. Liu 2014:¹⁹³ pain assessor.
207. Liu 2014:¹⁹³ reporter – appreciation of the importance of their role as proxy report.
208. Liu 2014:¹⁹³ reporter – submissive attitudes.
209. Liu 2014:¹⁹³ subordinate implementing prescribed medications.
210. Liu 2014:¹⁹³ subordinate implementing prescribed medications – underused reassessor.
211. Löckenhoff 2013:¹⁹⁴ age differences in time horizons (concerns about future side effects).
212. Löckenhoff 2013:¹⁹⁴ patient–provider relationship.
213. Lundh 2004:¹⁹⁵ an inconsistent patient.
214. Lundh 2004:¹⁹⁵ devotion to help.
215. Lundh 2004:¹⁹⁵ being a helpless helpoholic.
216. Lundh 2004:¹⁹⁵ frustration.
217. Lundh 2004:¹⁹⁵ helplessness.
218. Lundh 2004:¹⁹⁵ ineffective tools.
219. Lundh 2004:¹⁹⁵ variation 2.
220. Lundh 2004:¹⁹⁵ variation 3.
221. MacNeela 2010:¹⁹⁶ representing the person’s experience (depression).
222. MacNeela 2010:¹⁹⁶ representing the person’s experience (social categories).
223. MacNeela 2010:¹⁹⁶ representing the person’s experience (work and legal issues).

224. MacNeela 2010:¹⁹⁶ the therapeutic relationship.
225. MacNeela 2010:¹⁹⁶ the therapeutic relationship (gatekeeper).
226. MacNeela 2010:¹⁹⁶ the therapeutic relationship (moral guardian).
227. MacNeela 2010:¹⁹⁶ the therapeutic relationship (patient guide).
228. McConigley 2008:¹⁹⁷ barriers to implementation – resource issues.
229. McConigley 2008:¹⁹⁷ barriers to implementation – work role issues.
230. McConigley 2008:¹⁹⁷ needs associated with implementation.
231. McConigley 2008:¹⁹⁷ strengths to assist in the implementation process.
232. McCrorie 2015:¹⁹⁸ features of transactions between patients and GPs – continuity of care.
233. McCrorie 2015:¹⁹⁸ features of transactions between patients and GPs – mutuality and trust in the relationship.
234. McCrorie 2015:¹⁹⁸ features of transactions between patients and GPs – locating control and responsibility for change.
235. McCrorie 2015:¹⁹⁸ features of transactions between patients and GPs – absence of a shared management plan.
236. Mentes 2004:¹⁹⁹ distraction, inspection and telling the charge nurse.
237. Mentes 2004:¹⁹⁹ knowing the resident.
238. Mentes 2004:¹⁹⁹ pain assessment face and eyes.
239. O'Connor 2015:²⁰⁰ being under one roof.
240. O'Connor 2015:²⁰⁰ case conferences or team meetings.
241. O'Connor 2015:²⁰⁰ patients as whole persons.
242. O'Connor 2015:²⁰⁰ patients help themselves.
243. O'Connor 2015:²⁰⁰ training.
244. Øien 2011:²⁰¹ ambivalence and uncertainty.
245. Øien 2011:²⁰¹ impatience and disagreement.
246. Øien 2011:²⁰¹ seeking for common ground – a demanding negotiating process.
247. Oosterhof 2014:²⁰² experiences concerning the interaction (being open).
248. Oosterhof 2014:²⁰² experiences concerning the interaction (giving a clear explanation).
249. Oosterhof 2014:²⁰² experiences concerning the treatment outcome – acknowledgement for the physical part or the pain.
250. Oosterhof 2014:²⁰² experiences concerning the treatment outcome (shared understanding of the pain).
251. Parsons 2012:²⁰³ legitimating suffering (health professionals' beliefs about being able to diagnose chronic musculoskeletal pain).
252. Parsons 2012:²⁰³ the evolving nature of patients' and health professionals' models of understanding chronic musculoskeletal pain (patients' and health professionals' beliefs about pain causation).
253. Parsons 2012:²⁰³ the evolving nature of patients' and health professionals' models of understanding chronic musculoskeletal pain (health professionals' adaptation of causation beliefs).
254. Parsons 2012:²⁰³ development and tailoring of consultation and treatment approaches throughout patients' illness careers (HCPs' beliefs about consulting for and treatment of chronic musculoskeletal pain).
255. Patel 2008:²⁰⁴ GPs' personal challenges.
256. Patel 2008:²⁰⁴ psychosomatic interpretations.
257. Patel 2009:²⁰⁵ expectation mismatch.
258. Patel 2009:²⁰⁵ the challenges of secondary care services.
259. Paulson 1999:²⁰⁶ needing human support (disturbing feelings).
260. Poitras 2011:²⁰⁷ clinical relevance.
261. Poitras 2011:²⁰⁷ environment – work organisation.
262. Poitras 2011:²⁰⁷ environment – work organisation.
263. Poitras 2011:²⁰⁷ peers and stakeholders.
264. Poitras 2011:²⁰⁷ therapists – agreement with the guidelines.
265. Poitras 2011:²⁰⁷ therapists – compatibility with current practice.
266. Poitras 2011:²⁰⁷ therapists – impact on low-back pain disability.

267. Poitras 2011:²⁰⁷ therapists – understandability of the guidelines.
268. Ruiz 2010:²⁰⁸ waiting times for pain clinic.
269. Ruiz 2010:²⁰⁸ concerns about using pain medications (addiction dependency).
270. Ruiz 2010:²⁰⁸ concerns about using pain medications (medication diversion).
271. Ruiz 2010:²⁰⁸ concerns about using pain medications (side effects).
272. Ruiz 2010:²⁰⁸ poor training in pain management (on-the-job training).
273. Ruiz 2010:²⁰⁸ poor training in pain management (self-directed learning).
274. Ruiz 2010:²⁰⁸ poor training in pain management (training as a student resident).
275. Schulte 2010:²⁰⁹ communication between GPs and pain specialists.
276. Schulte 2010:²⁰⁹ GPs' attitude towards pain specialists.
277. Schulte 2010:²⁰⁹ referral from GPs to specialised pain centres.
278. Schulte 2010:²⁰⁹ experiences of GPs after referral to specialist pain clinics.
279. Scott-Dempster 2014:²¹⁰ changing practice from 'fix it' to 'sit with'.
280. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different – encourage self-reflection.
281. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different – realise I can do something.
282. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different.
283. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different – encourage self-reflection.
284. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different – discover through trying.
285. Scott-Dempster 2014:²¹⁰ process of realisation that life can be different – patients can't see.
286. Seamark 2013:²¹¹ chronic non-cancer pain is seen as different from cancer pain.
287. Seamark 2013:²¹¹ concerns around tolerance and addiction.
288. Seamark 2013:²¹¹ difficulties in assessing pain.
289. Seamark 2013:²¹¹ effect of experience and events.
290. Shye 1998:²¹² access to referral services.
291. Shye 1998:²¹² management expectations a double bind.
292. Shye 1998:²¹² patient characteristics.
293. Shye 1998:²¹² patient expectations – building and maintaining trust.
294. Shye 1998:²¹² time the scarcest resource.
295. Shye 1998:²¹² ambiguity of internal referral processes.
296. Siedlecki 2014:²¹³ core concepts – frustration.
297. Siedlecki 2014:²¹³ core concepts – moral distress.
298. Siedlecki 2014:²¹³ core concepts – taking ownership.
299. Siedlecki 2014:²¹³ core concepts – tenacity.
300. Siedlecki 2014:²¹³ nurse characteristics – attitude.
301. Siedlecki 2014:²¹³ nurse characteristics – discernment.
302. Siedlecki 2014:²¹³ nurse characteristics – knowledge.
303. Siedlecki 2014:²¹³ system barriers.
304. Slade 2012:²¹⁴ blame game – physiotherapists are critical when care-seekers fail to improve.
305. Slade 2012:²¹⁴ physiotherapists are challenged by diagnostic uncertainty (physiotherapists use surrogates for pathoanatomical diagnoses to provide solutions).
306. Slade 2012:²¹⁴ physiotherapists are challenged by diagnostic uncertainty (communicating the truth is difficult – physiotherapists feel pressured to diagnose).
307. Slade 2012:²¹⁴ physiotherapists perceive that care-seekers want a clear diagnosis.
308. Slade 2012:²¹⁴ physiotherapists seek 'certainty' from experienced colleagues (professional 'experts' are attractive models).
309. Slade 2012:²¹⁴ physiotherapists seek 'certainty' from experienced colleagues (workplace culture and mentors are important).
310. Slade 2012:²¹⁴ practitioners feel underprepared by traditional education models (physiotherapists believe they are underprepared by their education).
311. Slade 2012:²¹⁴ practitioners feel underprepared by traditional education models (experience is the real teacher).
312. Slade 2012:²¹⁴ practitioners feel underprepared by traditional education models (physiotherapists believe they are underprepared by their education).

313. Sloots 2009:²¹⁵ expectations regarding the aim of treatment.
314. Sloots 2010:²¹⁶ reasons for dropout in rehabilitation patients (acknowledgement or legitimisation of the pain complaints).
315. Sloots 2010:²¹⁶ reasons for dropout in rehabilitation patients (credibility with regard to foreign diagnosis).
316. Sloots 2010:²¹⁶ reasons for dropout in rehabilitation patients (trust in the rehabilitation physician).
317. Spitz 2011:²¹⁷ facilitators of opioid use – perceived patient-level barriers to opioid use.
318. Spitz 2011:²¹⁷ frustration treating pain in primary care.
319. Spitz 2011:²¹⁷ greater comfort using opioids in patients receiving palliative care.
320. Spitz 2011:²¹⁷ provider barriers to opioid use – concerns about opioid abuse, misuse or addiction.
321. Spitz 2011:²¹⁷ provider barriers to opioid use – concerns about regulatory and or legal sanctions.
322. Spitz 2011:²¹⁷ provider barriers to opioid use – fear of causing harm.
323. Spitz 2011:²¹⁷ provider barriers to opioid use – pain subjectivity.
324. Spitz 2011:²¹⁷ providers' opioid prescribing practices and attitudes.
325. Starrels 2014:²¹⁸ beliefs about the utility of opioid treatment agreements – prevention of opioid misuse.
326. Starrels 2014:²¹⁸ beliefs about the utility of opioid treatment agreements – diagnosis of opioid misuse.
327. Starrels 2014:²¹⁸ beliefs about the utility of opioid treatment agreements – physician self-protection.
328. Starrels 2014:²¹⁸ perceived effect of opioid treatment agreement use on the therapeutic alliance.
329. Starrels 2014:²¹⁸ perception of patients' risk of misuse.
330. Stinson 2013:²¹⁹ barriers to care (health-care systems barriers).
331. Stinson 2013:²¹⁹ barriers to care (societal barriers).
332. Stinson 2013:²¹⁹ pain impact (future).
333. Stinson 2013:²¹⁹ pain impact (physical impact).
334. Stinson 2013:²¹⁹ pain impact (role functioning).
335. Stinson 2013:²¹⁹ pain impact (social and emotional impact).
336. Stinson 2013:²¹⁹ pain management strategies (pharmacological strategies).
337. Stinson 2013:²¹⁹ pain management strategies (psychological strategies).
338. Thunberg 2001:¹⁵⁰ professional ambiguity.
339. Thunberg 2001:¹⁵⁰ professionals' thoughts on ideal care.
340. Thunberg 2001:¹⁵⁰ professionals' thoughts on ideal care (holistic approach).
341. Thunberg 2001:¹⁵⁰ professionals' thoughts on ideal care (the patient in his or her context).
342. Thunberg 2001:¹⁵⁰ professionals' thoughts on ideal care (validating).
343. Thunberg 2001:¹⁵⁰ professionals' caring reality.
344. Thunberg 2001:¹⁵⁰ professionals' caring reality illness carried by the patient.
345. Thunberg 2001:¹⁵⁰ professionals' caring reality monofactorial aetiology.
346. Thunberg 2001:¹⁵⁰ professionals' caring reality objective analysis.
347. Toye 2015:²²⁰ a glimpse beneath the surface.
348. Toye 2015:²²⁰ a glimpse beneath the surface (the challenge of clinical time constraints).
349. Toye 2015:²²⁰ bombarded by despair – I've used the phrase detached empathy.
350. Toye 2015:²²⁰ bombarded by despair – it was a bit uncomfortable listening to the things she said.
351. Toye 2015:²²⁰ a glimpse beneath the surface (I can now see her struggle to perform pain).
352. Toye 2015:²²⁰ reconstructing the clinical encounter as a shared journey – we are going to chip away at this in bite-sized chunks.
353. Toye 2015:²²⁰ reconstructing the clinical encounter as a shared journey – this is a journey to healing not fixing.
354. Toye 2015:²²⁰ pitfalls of the medical model – the challenge of 'sitting with' (not fixing).
355. Toye 2015:²²⁰ pitfalls of the medical model – the challenge of breaking down the dichotomy of mind and body.
356. Tveiten 2009:²²¹ challenges of conducting a dialogue.
357. Tveiten 2009:²²¹ different dialogues and varying purposes.
358. Tveiten 2009:²²¹ patient participation and the patient as an expert – easier said than done.
359. Tveiten 2009:²²¹ the importance and characteristics of the good dialogue.

360. Wainwright 2006:²²² clinical uncertainty.
361. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship.
362. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship (negotiated diagnosis).
363. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship (covert shift to the psychosocial paradigm).
364. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship (negotiated diagnosis).
365. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship (overt shift to the psychosocial paradigm).
366. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship – covert shift to the psychosocial paradigm (bridging technologies: fibromyalgia).
367. Wainwright 2006:²²² psychosocial problems and the doctor–patient relationship – covert shift to the psychosocial paradigm (bridging technologies: amitriptyline).
368. Wilson 2014:²²³ symbolic languages – legitimisation of practice.
369. Wilson 2014:²²³ symbolic languages – diagnostic expertise.
370. Wilson 2014:²²³ symbolic languages – the evidence base.
371. Wilson 2014:²²³ symbolic languages – the individual patient.
372. Wynne-Jones 2014:²²⁴ approaches to evaluating patients’ work problems.
373. Wynne-Jones 2014:²²⁴ issuing of fit notes – GP as ‘patient advocate’.
374. Wynne-Jones 2014:²²⁴ perceived ability to manage ‘work and pain’.
375. Wynne-Jones 2014:²²⁴ policies and penalties in the workplace.
376. Zanini 2014:²²⁵ patients’ perspectives of their health condition.
377. Zanini 2014:²²⁵ patients’ perspectives of treatments.

Appendix 3 Concepts included in the opioid concept analysis

Baldacchino 2010¹⁵³

1. Factors associated with abuse, misuse or diversion of prescription opioids.
2. Judgements about if patient is substance user affect chronic non-cancer pain management.
3. Management of chronic non-cancer pain among people with a history of substance abuse.
4. Physicians' attitudes to prescribing opioids for chronic non-cancer pain management.

Barry 2010¹⁵⁵

5. Physician factors: opioid agreements.
6. Patient factors: attitudes towards opioid analgesics.
7. Patient factors: motivation.
8. Patient factors: physician responsiveness to patients' pain.
9. Physician factors: aberrant behaviours.
10. Physician factors: coexisting disorders.
11. Physician factors: expertise in pain management.
12. Physician factors: expertise in treating co-occurring chronic pain and opioid addiction.
13. Physician factors: interest in pain management.
14. Physician factors: pain assessment.

Berg 2009¹⁵⁷

15. Practising in a context of ambiguity: decision-making frameworks.
16. Practising in a context of ambiguity: the ambiguity of pain.
17. Practising in a context of ambiguity: decision-making frameworks – pain management strategies.
18. Practising in a context of ambiguity: decision-making frameworks – perception and management of treatment risks.
19. Practising in a context of ambiguity: decision-making frameworks – perception and management of treatment risks (risk of disciplinary consequences).
20. Practising in a context of ambiguity: decision-making frameworks – perception and management of treatment risks (risk of deception).
21. Practising in a context of ambiguity: decision-making frameworks – perception and management of treatment risks (risk of abuse).
22. Treatment goals.

Briones-Vozmediano 2013¹⁶¹

23. Therapeutic management (health professionals).

Cameron 2015¹⁶²

24. Information retrieval.
25. Physiology, comorbidities and signs of ageing.

Esquibel 2014¹⁷⁴

- 26. Effect of chronic opioid therapy on doctor–patient relationship: examples of chronic opioid therapy embittering the doctor–patient relationship.
- 27. Effect of chronic opioid therapy on doctor–patient relationship: prescribing opioids – an unwanted burden, an ineffective solution.
- 28. Effect of chronic opioid therapy on doctor–patient relationship: perspectives on ideal and difficult patients’ right to pain medications.

Fontana 2008¹⁷⁵

- 29. Critical analysis: in the best interest of society.
- 30. Critical analysis: in the best interest of the nurse.
- 31. Critical analysis: in the best interest of the patient.

Gooberman-Hill 2011¹⁷⁷

- 32. Are opioids the best option?
- 33. Are opioids the best option? Managing adverse effects and assessing vulnerable patients.
- 34. Are opioids the best option? The importance of previous experience.
- 35. Are opioids the best option? Views about opioid addiction, withdrawal and misuse.

Kaasalainen 2007¹⁸⁷

- 36. Reluctance of health-care providers to use opioids.
- 37. Working to individualise pain treatments.

Kaasalainen 2010¹⁸⁹

- 38. Residents/family.

Kilaru 2014¹⁹⁰

- 39. Associations with underlying attitudes towards opioid prescribing.
- 40. Attitudes towards guidelines: liability.
- 41. Attitudes towards guidelines: patient diversion.
- 42. Attitudes towards guidelines: physician autonomy.
- 43. Attitudes towards guidelines: public health.
- 44. Definition and awareness of guidelines: hospital-based guidelines.
- 45. Definition and awareness of guidelines: state and national guidelines.
- 46. How physicians use guidelines: communication.

Krebs 2014¹⁹¹

- 47. Need to protect patients from harm.
- 48. Inadequate time and resources.
- 49. Opioid monitoring as a ‘law enforcement’ activity.
- 50. Relying on general impressions of risk.

Löckenhoff 2013¹⁹⁴

- 51. Age differences in time horizons (concerns about future side effects).
- 52. Patient–provider relationship.

McCrorie 2015¹⁹⁸

- 53. Features of transactions between patients and GPs: mutuality and trust in the relationship.
- 54. Features of transactions between patients and GPs: locating control and responsibility for change.
- 55. Features of transactions between patients and GPs: absence of a shared management plan.

Ruiz 2010²⁰⁸

- 56. Concerns about using pain medications (addiction dependency).
- 57. Concerns about using pain medications (medication diversion).
- 58. Concerns about using pain medications (side effects).

Seamark 2013²¹¹

- 59. Chronic non-cancer pain is seen as different from cancer pain.
- 60. Concerns around tolerance and addiction.
- 61. Difficulties in assessing pain.
- 62. Effect of experience and events.

Siedlecki 2014²¹³

- 63. Nurse characteristics: attitude.

Spitz 2011²¹⁷

- 64. Facilitators of opioid use: perceived patient-level barriers to opioid use.
- 65. Greater comfort using opioids in patients receiving palliative care.
- 66. Provider barriers to opioid use: concerns about opioid abuse, misuse or addiction.
- 67. Provider barriers to opioid use: concerns about regulatory and/or legal sanctions.
- 68. Provider barriers to opioid use: fear of causing harm.
- 69. Provider barriers to opioid use: pain subjectivity.
- 70. Providers' opioid prescribing practices and attitudes.

Starrels 2014²¹⁸

- 71. Beliefs about the utility of opioid treatment agreements: prevention of opioid misuse.
- 72. Beliefs about the utility of opioid treatment agreements: diagnosis of opioid misuse.
- 73. Beliefs about the utility of opioid treatment agreements: physician self-protection.
- 74. Perceived effect of opioid treatment agreement use on the therapeutic alliance.
- 75. Perception of patients' risk of misuse.

A decorative graphic consisting of numerous thin, parallel green lines that curve from the left side of the page towards the right, creating a sense of movement and flow.

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This report presents independent research funded by the National Institute for Health Research (NIHR). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health

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